

LRB-2020-28 – 20/01197/FLL – Erection of 4 dwellinghouses, land 350 metres south east of Broadgreen, Cargill

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**LRB-2020-28 – 20/01197/FLL – Erection of 4
dwellinghouses, land 350 metres south east of
Broadgreen, Cargill**

**PAPERS SUBMITTED
BY THE
APPLICANT**



Pullar House 35 Kinnoull Street Perth PH1 5GD Tel: 01738 475300 Fax: 01738 475310 Email: onlineapps@pkc.gov.uk

Applications cannot be validated until all the necessary documentation has been submitted and the required fee has been paid.

Thank you for completing this application form:

ONLINE REFERENCE 100212573-010

The online reference is the unique reference for your online form only. The Planning Authority will allocate an Application Number when your form is validated. Please quote this reference if you need to contact the planning Authority about this application.

Applicant or Agent Details

Are you an applicant or an agent? * (An agent is an architect, consultant or someone else acting on behalf of the applicant in connection with this application)

☐ Applicant ☒ Agent

Agent Details

Please enter Agent details

Company/Organisation:	Stuart King Architecture		
Ref. Number:		You must enter a Building Name or Number, or both: *	
First Name: *	Euan	Building Name:	Suite 2 Abtel Building
Last Name: *	Miller	Building Number:	
Telephone Number: *	01383 25722	Address 1 (Street): *	Pitreavie Business Park
Extension Number:		Address 2:	Pitreavie Drive
Mobile Number:		Town/City: *	Dunfermline
Fax Number:		Country: *	Fife
		Postcode: *	KY11 8US
Email Address: *	Euan@stuartkingarchitecture.com		

Is the applicant an individual or an organisation/corporate entity? *

☐ Individual ☒ Organisation/Corporate entity

Applicant Details

Please enter Applicant details

Title:	<input type="text"/>	You must enter a Building Name or Number, or both: *	
Other Title:	<input type="text"/>	Building Name:	<input type="text"/>
First Name: *	<input type="text"/>	Building Number:	<input type="text" value="15"/>
Last Name: *	<input type="text"/>	Address 1 (Street): *	<input type="text" value="Bruce Drive"/>
Company/Organisation	<input type="text" value="Freewheelin Ltd"/>	Address 2:	<input type="text"/>
Telephone Number: *	<input type="text"/>	Town/City: *	<input type="text" value="Murthly"/>
Extension Number:	<input type="text"/>	Country: *	<input type="text" value="Perth"/>
Mobile Number:	<input type="text"/>	Postcode: *	<input type="text" value="PH1 4FD"/>
Fax Number:	<input type="text"/>		
Email Address: *	<input type="text" value="REDACTED"/>		

Site Address Details

Planning Authority:	<input type="text" value="Perth and Kinross Council"/>
Full postal address of the site (including postcode where available):	
Address 1:	<input type="text"/>
Address 2:	<input type="text"/>
Address 3:	<input type="text"/>
Address 4:	<input type="text"/>
Address 5:	<input type="text"/>
Town/City/Settlement:	<input type="text"/>
Post Code:	<input type="text"/>

Please identify/describe the location of the site or sites

Northing	<input type="text" value="735861"/>	Easting	<input type="text" value="314682"/>
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Description of Proposal

Please provide a description of your proposal to which your review relates. The description should be the same as given in the application form, or as amended with the agreement of the planning authority: *
(Max 500 characters)

Erection of 4 dwellinghouses at Land 350 Metres South East Of Broadgreen Cargill Application reference number - 20/01197/FLL

Type of Application

What type of application did you submit to the planning authority? *

- ☒ Application for planning permission (including householder application but excluding application to work minerals).
☐ Application for planning permission in principle.
☐ Further application.
☐ Application for approval of matters specified in conditions.

What does your review relate to? *

- ☒ Refusal Notice.
☐ Grant of permission with Conditions imposed.
☐ No decision reached within the prescribed period (two months after validation date or any agreed extension) – deemed refusal.

Statement of reasons for seeking review

You must state in full, why you are seeking a review of the planning authority's decision (or failure to make a decision). Your statement must set out all matters you consider require to be taken into account in determining your review. If necessary this can be provided as a separate document in the 'Supporting Documents' section: * (Max 500 characters)

Note: you are unlikely to have a further opportunity to add to your statement of appeal at a later date, so it is essential that you produce all of the information you want the decision-maker to take into account.

You should not however raise any new matter which was not before the planning authority at the time it decided your application (or at the time expiry of the period of determination), unless you can demonstrate that the new matter could not have been raised before that time or that it not being raised before that time is a consequence of exceptional circumstances.

please see uploaded supporting documents titled Cargill LRB Statement, Cargill productions and 18-01664 - Cargill Development - Site Layout REV A-(0) 02 Proposed Site Layout A2

Have you raised any matters which were not before the appointed officer at the time the Determination on your application was made? *

☐ Yes ☒ No

If yes, you should explain in the box below, why you are raising the new matter, why it was not raised with the appointed officer before your application was determined and why you consider it should be considered in your review: * (Max 500 characters)

Please provide a list of all supporting documents, materials and evidence which you wish to submit with your notice of review and intend to rely on in support of your review. You can attach these documents electronically later in the process: * (Max 500 characters)

Cargill LRB Statement (STATEMENT ON THE GROUNDS OF APPEAL: Application Number-20/01197/FLL), Cargill productions and 18-01664 - Cargill Development - Site Layout REV A-(0) 02 Proposed Site Layout A2

Application Details

Please provide the application reference no. given to you by your planning authority for your previous application.

20/01197/FLL

What date was the application submitted to the planning authority? *

20/08/2020

What date was the decision issued by the planning authority? *

19/11/2020

Review Procedure

The Local Review Body will decide on the procedure to be used to determine your review and may at any time during the review process require that further information or representations be made to enable them to determine the review. Further information may be required by one or a combination of procedures, such as: written submissions; the holding of one or more hearing sessions and/or inspecting the land which is the subject of the review case.

Can this review continue to a conclusion, in your opinion, based on a review of the relevant information provided by yourself and other parties only, without any further procedures? For example, written submission, hearing session, site inspection. *

☒ Yes ☐ No

In the event that the Local Review Body appointed to consider your application decides to inspect the site, in your opinion:

Can the site be clearly seen from a road or public land? *

☒ Yes ☐ No

Is it possible for the site to be accessed safely and without barriers to entry? *

☒ Yes ☐ No

Checklist – Application for Notice of Review

Please complete the following checklist to make sure you have provided all the necessary information in support of your appeal. Failure to submit all this information may result in your appeal being deemed invalid.

Have you provided the name and address of the applicant? *

☒ Yes ☐ No

Have you provided the date and reference number of the application which is the subject of this review? *

☒ Yes ☐ No

If you are the agent, acting on behalf of the applicant, have you provided details of your name and address and indicated whether any notice or correspondence required in connection with the review should be sent to you or the applicant? *

☒ Yes ☐ No ☐ N/A

Have you provided a statement setting out your reasons for requiring a review and by what procedure (or combination of procedures) you wish the review to be conducted? *

☒ Yes ☐ No

Note: You must state, in full, why you are seeking a review on your application. Your statement must set out all matters you consider require to be taken into account in determining your review. You may not have a further opportunity to add to your statement of review at a later date. It is therefore essential that you submit with your notice of review, all necessary information and evidence that you rely on and wish the Local Review Body to consider as part of your review.

Please attach a copy of all documents, material and evidence which you intend to rely on (e.g. plans and Drawings) which are now the subject of this review *

☒ Yes ☐ No

Note: Where the review relates to a further application e.g. renewal of planning permission or modification, variation or removal of a planning condition or where it relates to an application for approval of matters specified in conditions, it is advisable to provide the application reference number, approved plans and decision notice (if any) from the earlier consent.

Declare – Notice of Review

I/We the applicant/agent certify that this is an application for review on the grounds stated.

Declaration Name: Mr Euan Miller

Declaration Date: 04/12/2020

STATEMENT ON THE GROUNDS OF APPEAL: Application Number-20/01197/FLL

PERTH AND KINROSS LOCAL REVIEW BODY

CLIENTS: Freewheelin' Ltd.

ARCHITECTS: Stuart King A&D-Craig Sutherland and Euan Miller

PLANNING CONSULTANTS: Lowland Planning Associates-Anne Cunningham

DEVELOPMENT: Erection of 4 Houses at Wester Balhomie, Cargill

INTRODUCTION

The planning application to erect 4 architect designed, sustainably built, family homes on a brownfield site close to the village of Cargill, has been refused on the grounds that the proposal does not accord with the Perth and Kinross Local Development Plan 2 (PKLDP2) and the related Houses in the Countryside Supplementary Planning Guidance.

We, the agents, seek to appeal this refusal on the grounds that the proposal **does** comply fully with the terms of both those documents.

The application comprises plans, reports/surveys and 3 planning statements. The latter which greatly expand on all the policy issues relating to this case. They will form Productions 1,2 and 3 of this appeal and they contain the majority of our arguments in favour of the development. We respectfully direct Members to those 3 productions, which will assist in gaining a rounded picture of what we are proposing and those documents, of course, work symbiotically with the other reports, surveys and house plans on file.

A full list of Productions can be found as an appendix to this paper and they are also listed on the appeal form. It is fair to the reader that this Statement on the Grounds for Appeal is a summary, albeit a detailed one, of the whole application. Despite the fact that the development is only for a small, 4 house development, there are 51 documents listed on the planning portal and its contents are all relevant should anyone wish to cross-reference with this paper and with Productions 1,2 and 3.

THE SITE and ITS HISTORY

The land at Wester Balhomie was formerly occupied by a large farm steading with other pendicles (old Scots for small stand-alone agricultural parcels of land, managed as lowland crofts). The farm steading largely remains as ground and just below ground level structures. The last building, which was an old open-ended stone shed, was only demolished when a Permission in Principle and then a detailed planning application when there was approval for a single, but very large, house. This was granted planning permission in 2015. This permission is still LIVE as the site

has been serviced. This older proposal was deemed to be policy compliant as the site was, and still is, considered to be rural brownfield land. We had an expert in brownfield and contaminated land brought in to give an opinion on the condition of the site and he also provided a great deal of the development history of Wester Balhovie. This opinion forms Production 4.

Now that the buildings and ancillary structures, such as a well, are only just visible, the field bears evidence of its brownfield and contaminated land credentials through the presence overall of tussocky, rough grassland. This type of vegetation is prevalent only in areas that are nutrient poor and will most certainly have contaminants within the soils. It is clear to see that the appearance of the application site is very different to all the other farmland in this part of the County, as this agricultural area generally falls within the Hutton Institute definition of land Classes 3.1, 4.1 and 4.2. In terms of land quality in Scotland, this is excellent land and can indeed reach up to Class 2 when it has been improved by the landowner. The Hutton Institute Land Classification Map for Scotland clearly shows that, over Perthshire, agricultural land is good quality in Scottish terms. Those classes of land are very far removed from the land at the appeal site. This type of degraded land does not provide a good habitat for fauna due to it being of poor soils and has a grass height that will not provide decent ground cover for animals to hide and shelter in. This land is not naturalising well in any high amenity way, despite an analysis to the contrary by the officers.

Of course, due to the fact that the appellant owns the woodland surrounding the site and has committed to the management of that woodland through this application, we are ensuring long-term, continuous tree cover here. These old policy woodlands were not involved in the extant planning permission. We wish to include them now as they are invaluable for biodiversity, provide a wood resource from old or fallen trees (for biofuel stoves etc.) and of course they provide a stunning backdrop and setting for these family homes. We have provided a tree constraints plan showing the houses in relation to some trees within the curtilage of the houses on plots 3 and 4. The impact on trees is minimal (5 trees are affected to some degree), but given the fact that the whole woodland asset will be protected and enhanced by the developer this is not a good reason to refuse a quality development, with all the benefits this proposal will bring. The trees will be saved from further degradation by this independent builder, including ourselves, as a team. We collectively wish to see beautiful, sustainable, family homes here where children can play safely within the trees and immerse themselves in nature. The tree constraints plan forms Production 5.

THE HOUSE DESIGNS

A Design Brief has been prepared by the architects and this forms Production 6. Members will see that these homes are just stunning. The design incorporates cutting-edge energy conservation measures and the materials used externally are natural. Stone, slate and wood are all prevalent. As well as having a wonderful setting through the presence of a wooded backdrop, they all have large gardens and in time these gardens will grow to provide new habitats for both fauna and flora. Stuart King Architecture and Design are leaders in the sustainability field and they start projects with energy conservation to the fore; creating buildings that go well beyond statutory building standards. The design of the new homes has not been adversely criticised by the case officer and we can therefore conclude that the architecture meets the high standards expected of developers in Perth and Kinross.

RESPONSE TO THE REASONS FOR REFUSAL IN DETAIL

Reason 1

The officers state that the proposal is contrary to the PKLDP2-Policy 19 which covers Housing in the Countryside. The Report of Handling refers to a raft of other policies most of which are not relevant to this proposal and we respectfully request that the examination of this proposal concentrates on the Policies stated in the Decision Notice as these are the only ones of concern to the case officer.

Policy 19 has 6 elements. Parts 1 to 5 are not applicable to this appeal. However, part 6 concerns brownfield rural land. As explained above, this site is entirely covered in the structures and residues of previous development and there is no way that the site cannot be considered as brownfield across the whole proposed development area. The case officer appears to accept this fact but, confusingly, has also considered that it is only the area delineated by the old planning permissions that are duly affected by the wide-spread scatter of waste. P&K Planning can accept a single house as fine, but 4 is not, despite the fact that the ground conditions are pretty much all the same over the entire field. Please refer again to Production 4, our expert's opinion on the condition of the land. This site is brownfield. This site **does** present contamination as evidenced by the type of vegetation there. The site is not naturalising well, again, this can readily be devised from the very- poor vegetation over the whole field.

Importantly, we strongly refute the case officer's view that 1 house is fine but 4 is not. This is not, in any way, a sustainable way to develop. We collectively as planners, designers, developers and decision makers, should be considering the development of land suitable for housing in the most efficient way possible. Why is there a need to build at a density less than appropriate to the land that is readily available? This is not the aim of our national nor our local planning policies. The 4 houses are right for this site. This fact is accepted in the Report of Handling where it is pointed out that residential amenity is not adversely impacted at this very low density of housing.

The houses are considered, by any standard, attractive. They would be nestled in a frame of mature trees (exactly as per the example given in the HITC SPG which advises on the quality of siting of new houses in the countryside) and they would not be seen from the main road. We, of course, are not suggesting that as the buildings cannot be seen from the road, that this is essential. Good architecture does not require to be hidden. It just happens that the houses cannot be seen until close to the entrance gate to the site. It is a discrete new development that will add to this lovely area and most certainly will not detract from it.

Reason 2

The officers state that the proposal conflicts with Policy 41- Biodiversity. We find this quite an anomaly. A Habitat Survey was **not** at any time requested by Planning. We of course, would have provided the same had it been a crucial element that was needed to assess the application. I refer you to the paragraphs above regarding the condition of the site and its lack of capabilities to grow vegetation well. There are no protectionist designations here and we do not anticipate that there are any habitats present that are particularly precious. However, we are conscientious developers and if a 'prior to development' condition was placed on any approval, we would happily provide a Phase 1 Habitat survey. We are confident in our assessment however that the site is a candidate for housebuilding and not restricted due to the presence of protected fauna and flora.

Reason 3

Policy 40-Forestry and Trees has been used as another reason for refusal. Again, we are confused by the rationale behind this issue. We respectfully request you look at all the information provided by ourselves in respect of the woodlands in our control. Instead of ignoring the presence of trees here we have provided a full tree survey of the wider woodland around the site and also a tree constraints plan showing trees affected by the proposed development. This information is highlighted as Production 5. I am afraid that the Council officials have not analysed this information and the topographical survey correctly. There are 5 trees maximum that will be impacted during development. These are coloured in with red ink to highlight them on the constraints plan. There is also a cross-reference on an accompanying sheet specifically discussing the trees within plots. Whilst losing even a small number of trees in any development scenario is regrettable, we are actually protecting and enhancing a whole woodland that is in need of management. It is helpful to remind Members that the planning permission for the single house, that can be built here at any point in the future, did not discuss any trees in the area and did not present any future plans for the woodland management of this important asset.

Additionally, we tabled the idea of only developing 3 units here (Production 3) which would mean that no trees would be affected by development. This was dismissed by Planning. We of course would much prefer 4 units, as the layout for 4 houses works really well visually as a cluster. But, should members prefer 3 houses instead of 4 so be it. The offer is still on the table.

CONCLUSION

With this appeal, we are hopefully having a mature discussion on what is truly suitable for the Wester Balhomie site. Had the development been contrary to the very important planning policies and guidance of P&K Council, we would not have pursued the application nor this appeal. The site has an extant planning permission, for a single house, with a design that is not following the Council's own residential development standards for quality development in the countryside.

We genuinely wish to give due respect to this area of rural Perthshire. We strongly believe we have presented a case more than worthy of approval by the LRB.

At this point in time, it is worthwhile to remind ourselves that our economy is taking a big hit due to presence of Covid 19 in our lives. This type of development is ideal for the small local developer. The volume builders would not be interested in building at this small scale. Presenting opportunities that lead to new blood in an area, pay a high level of council tax, give support to local schools and create jobs must surely be encouraged. In recent times the Scottish Government and their Chief Planner have announced the need for positive planning to help us all re-build the country. Developments such as ours clearly fulfil that remit.

We commend this proposal to Members.

Anne Cunningham MRTPI

November 2020

Notes / Revisions:

- Clarity update to impacted trees
-
-
-

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DO NOT SCALE THIS DRAWING FOR CONSTRUCTION PURPOSES - ALWAYS USE WRITTEN DIMENSIONS - ALL DIMENSIONS TO BE VERIFIED ON SITE

Topographical survey by Geo-Info

Tree Felling summary:

367
368
369
372
375

5 Trees felled in total

Please refer to tree survey data by Blebo Tree Surveys

- Material Key:**
- Stone Chipped Driveway
 - Stone Wall
 - Concrete Slabs
 - Tarmac Access Road
 - Impacted root area (1) 358
 - Tree felled (5)

Development Site		Cargill Development	
Client:		Freewheelin Ltd	
REV	DATE	BY	AMENDMENTS
Stuart King Architecture & Design		Drawn By: CS	
18-01664		Scale: 1:500	
Date: DEC 2019		A2	
Drawing Title:		Proposed housing development of 4 dwellings at Cargill Perthshire - 2 in No. Variations	
Title Sheet:		Proposed Site Layout Plan	
DWG No:		18-01664 (0) 02	
Rev:		A	



LIST OF PRODUCTIONS

PLANNING APPEAL AGAINST THE REFUSAL OF PLANNING PERMISSION AT WESTER BALHOMIE,
CARGILL

PRODCUTION 1: 1st Planning Statement 2019

PRODUCTION 2: 2nd Planning Statement 2020

PRODUCTION 3: 3rd Planning Statement in Response to Case Officers Final View on the Proposal.
2020

PRODUCTION 4: Expert Opinion on Brownfield Land from Environmental and Development Services

PRODUCTION 5: Tree Survey and Tree Constraints Plan (with cross-referencing details highlighting
the trees within plots 3 and 4.

PRODUCTION 6: Design Brief prepared by SKAD.

PLANNING SUPPORTING STATEMENT

ERECTION OF 4 HOUSES AT WESTER BALHOMIE, CARGILL, PERTHSHIRE

APPLICANT: JIM TAIT, FREEWHEELIN' Ltd

ARCHITECTS: CRAIG SUTHERLAND/EUAN MILLER ,STUART KING ARCHITECTURE

PLANNING CONSULTANT: ANNE CUNNINGHAM, LOWLAND PLANNING ASSOCIATES

SETTING THE SCENE

The valley of the River Tay north of Perth is exemplified by countryside estates, productive farmland and small villages, which are historically closely related to their neighbouring estates. Estate management has always incorporated a strong landscape structure , with policy woodland being a predominant feature alongside a scatter of cottages which would have housed the gamekeeper, forester, ghillies and other staff. The Victorian and early Edwardian period saw areas such rural Perthshire flourish through the creation of these estates . Those managed landscapes have left a wonderful legacy which must be respected and they provide the template for future development. The sphere of influence of the nearby C listed Scots Baronial Balhomie House, with it's turrets and arabesque windows, stretches from the banks of the Tay southwards towards the planning application site at Wester Balhomie. It is in this spirit of the innovation that has created the high quality, attractive landscape and built environment that exists here that visionary approach now provides the inspiration for the creation of 4 stunning and environmentally sustainable houses at Wester Balhomie. It is so important that as an area evolves the history and landscape is respected. However, contemporary design is crucial. Preservation and mothballing , whether of a building or landscape can do a disservice to the art of design and the way people live today. Development opportunities such as this are rare and only a special design resolution will suffice.

PLANNING HISTORY

The application site has benefitted from a Permission in Principle and a detailed planning permission for a single, large, house granted in 2014 but has remained undeveloped. Those permissions have therefore lapsed. (14/00661/IPL and 14/02131/FUL). The policy justification for allowing this new house in the countryside was the fact that the site had been previously developed, albeit with an old bothy, and the fact that the design employed was of high quality and would have no negative effects on the area as a whole. The Development Plan policies on which the previous permissions were granted remain extant and relevant. The bothy has now gone and what remains is a bare field of tussocky grass. The woodland

surrounding this field on 3 sides did not come into play in that previous planning proposal. The delegated report associated with application 14/02131/FUL made reference to the broadleaved woodland only as it providing a screen to the new house. This is not an rationale that we agree with as development, particularly in a sensitive rural setting, should be of such high quality that it should not have to be mitigated by hiding behind trees. The trees of course do provide a wonderful setting for any development and in the case of our new proposals the woodland is fundamental.

THE PROPOSAL

Stuart King Architecture, with Jim Tait of Freewheelin' Ltd. and Lowland Planning have prepared a planning application for 4 detached houses where the site and setting dictate what is presented to Perth and Kinross Council. Unlike the previous permissions the applicant who owns the policy woodland surrounding the site , and whilst the application site itself is a bare field in the main, Jim Tait is giving a committment to managing the woodland, something that has not taken place for decades. We now have a holistic approach to development here. There is no cherry-picking. Developing the bare ground and ignoring the rest is not on the agenda.

The architects have prepared a design statement to accompany this application. The house plans also speak for themselves and are exceptional. The firm specialises in built-in sustainability of buildings and as well as being contemporary in design , using natural materials, they are very much breaking the mould by going far and beyond the energy conservation requirements of current building standards.

There are 2 house types presented here. Each is located in a large plot , some of which will incorporate mature trees (which will of course be protected during development). Traditional rural housing design in Scotland tends to follow a few 'rules'. Here is no different in that the designs incorporate steeply pitches roofs, have a vertical emphasis on the windows and be rather strong and solid in character. But they also have a finesse and use a palette of materials that look right in their countryside setting. Stone, wood, slate - the houses will grow out of the land and not merely be placed on it.

Over-engineering of access roads and the use of suburban fencing for boundary treatments is forbidden. They will not look good. The way the site is lit to avoid light pollution is important. This can be achieved by low or bollard style lights. Agri-spec post and wire fencing with native species hedging (hawthorn, blackthorn, dog rose) and stone walling are all acceptable ways of differentiating the fues. The emphasis is on greening the site so that in time the houses will melt into the woodland landscape. Hard transitional zones from plot to woodland edge must be resisted.

PLANNING POLICY POSITION

There is a positive residential planning history associated with the Wester Balhomie site. However, it is noted that only a few Local Development Plan (LDP) policies were cited as pertinent to that previous decision. In addition to the policies on Placemaking , Developer Contributions and Housing in the Countryside recorded in the Handling Report there is a raft of other Council planning policies and guidance that ensures that the proposal conforms to the Development Plan and satisfies Sections 25 and 37 (2)of the Town and Country (Scotland)Act 1997. We are aware that the adopted LDP 2104 has been

reviewed and LDP2 is through the Examination Period. We give material weight to the revised LDP2 and primacy to the adopted 2014 LDP. There is also new draft Supplementary Planning Guidance (SPG) covering Housing in the Countryside, replacing the adopted 2012 SPG on the same. Also recently reviewed are the Forestry and Woodland Strategy, Landscape and Renewable and Low Carbon Energy. All those SPGs came into play when developing our rural housing cluster.

The relevant LDP policies are:-

- Policy PM1A - Placemaking
- Policy PM3 - Infrastructure and Contributions
- Policy PM1C - Design Statements
- Policy RD3 - Housing in the Countryside
- Policy NE3 - Biodiversity
- Policy NE2A - Forestry, Woodlands and Trees
- Policy ER1A - Renewable Energy and Low Carbon Developments and Energy Conservation
- Policy ER6 - Landscape Management
- Policy EP1 - Climate Change, Carbon Reduction and Sustainable Construction

This proposal will be assessed for its compliance with those policies in turn.

Policy PM1A - Placemaking

Placemaking has been the mantra of the Royal Town Planning Institute (RTPI)for the last few decades. This is simply a word that encapsulates the need for planning proposals to ' be right for the site.' The latter is Lowland Planning's mantra.

The planning profession has these days to take into account a multitude of factors in assessing development schemes. It is not simple, but it is thorough. In the case of Wester Balhovie, it is the setting of the site relative to the surrounding woodlands that allows the proposal to be ' right '. As explained above and in the design statement, it was essential that we respected the 'place'. The house plans reveal the ambition of the developer and his team to make sure that the housing cluster is a benign development. We have judged it to be so and indeed, in the ethos of positive planning, it provides an opportunity to ensure that the future of the woodland (and hence the landscape) is protected and enhanced. Policy PM1A is satisfied.

Policy PM3 - Infrastructure and Contributions

It is the norm for planning authorities to levy financial contributions for local facilities, particularly schools. Freewheelin' Ltd. are conscientious developers and will of course ensure any contributions that are either imposed or negotiated are paid on the grant of planning permission. These can be secured by either a Section 69 or a Section 75 Agreement.

This rural site will not be difficult to service. There is already, for example, an electricity supply to the site. A detailed SuDS plan will ensure environmentally sound surface water dispersal. Access roads are all Suds compliant too. The vehicular access onto the A93 is already there, and this will be improved to allow even safer access/egress to the site. There will, visually, be little change.

It should be noted that when the original single house was approved, there were no adverse comments from consultees. It is therefore anticipated that despite there being 4 houses with this proposal, we will not receive any negative comments from those same consultees. Policy PM3 is satisfied.

Policy PM1A - Design Statements

Stuart King Architecture have provided a design statement to accompany the application. It is comprehensive and allows the Planning Authority to see behind the scenes of the proposal. They are leaders in sustainable development and energy conservation in the built environment and they go above and beyond the current building standards requirements. The Design Statement dovetails with this planning statement.

Policy RD3 - Housing in the Countryside

This is arguably the pre-eminant planning policy against which rural housing is assessed. It is essential that we, collectively, regard development in the countryside as special. Rural housing clusters and small settlements such as nearby Cargill are common in rural Perthshire and they create a living countryside and have established communities. The draft SPG on Housing in the Countryside welcomes good new development that can add to and not detract from the rural landscape. The fact that our site at Wester Balhomie is in a ready-made woodland landscape is of great benefit and this fact was crucial to the previous planning permission. It must be repeated here that good quality, innovatively designed buildings should not have to be hidden. If a building is unattractive or not right for the site it does not merit approval regardless of being able to hide it or not. In this instance we are taking the opportunity to manage the woodland for the future. The trees are a very big bonus though.

We believe that all the reasons why the previous house was granted still stand. The slight increase in numbers is, in sustainability terms, makes the best use of this site. There is space for a low-density development. In amenity terms the site is perfect for these family homes. Each has large gardens and significant separation to ensure privacy and residential amenity is maintained. Site servicing is not greatly increased, there is no additional visual impact on the area through the fortunate presence of an extensive woodland asset and it really would be splitting hairs to say 1 is fine but 4 is not. It's common sense and the right way to add to the rural housing stock in Perthshire. As stated above, this County has a very vibrant rural housing scene and this development will fit very well with this tradition. This proposal, like the original permission of 2014, fully complies with the Housing in the Countryside policy

and the 2012 and 2019 SPGs on the same.

Policy NE3 - Biodiversity

All new planning proposals should of course take the natural environment into account. This can be easier in the countryside, but it still needs a developer to help boost the fauna and flora of their sites (and surroundings) in rural areas. Wester Balhomie presents a great opportunity to provide new habitats and protect and enhance what's there. We are in this paper waxing lyrical about the policy woodlands and this obviously brings the most obvious locus for nature conservation and enhancement. More shall be discussed on the woodlands below.

However, it is the intention of our team to ensure that the application site itself, which at present is pretty much a green desert, also brings forth new opportunities to create habitats and enhance the biodiversity of the area. In addition to new garden grounds being established there will be a significant amount of new native species hedging along plot boundaries which of course is extremely favourable for attracting song birds. The gardens will effectively flow and merge with the broadleaved woodland and this will link the built environment to the surrounding habitats that already exist in the trees. A green corridor is the aim. The policy on biodiversity is satisfied.

Policies ER2A - Forestry, Woodlands and Trees Landscape

ER 6 - Landscape

It is wise to discuss these 2 policies in the same section. They are intrinsically linked in the case of Wester Balhomie as it is the woodland setting that makes the site and landscape so fantastic. We have employed an arboriculturist to carry out an initial survey of the trees adjacent to the site and there will in due course be a woodland management plan prepared for all the woodlands in our ownership. It is fundamental that following a total lack of a strategy for ensuring continuous cover woodland that one is prepared and acted upon. This management plan will include for selective felling of diseased and dying trees (ash dieback is present), tree surgery works and of course a replanting scheme to replace any trees that are lost. Once we know exactly what needs done in the heart of the woodland we may apply for a Felling Licence from the Forestry Commission and this allows for the extraction of usable timber, as this is a sustainable way of managing trees. This creates value and supports the long-term viability of the woodlands. It is a solid forestry strategy and one that is long over-due.

Some of the plots will have the benefit of having trees within their boundary. This is such a visual asset to the development site and for future residents and provided the trees are wholly protected during development according to BS 5837:2012 this is very attainable without harm to the trees. Full details of the health of these individual trees within the plots will be carefully assessed and only trees which are in good condition or that require only a modest amount of tree surgery will be enclosed within the feus.

For the sake of repetition, the landscape of this area is dominated by policy woodlands. It remains the case that this will be the dominant factor in relation to landscape protection and enhancement. There is full consideration of the landscape in this planning application and the terms of both ER2A and ER6 are

met in full.

Policies ER1 and ER1A – Energy Conservation, Climate Change and Sustainable Developments

As stated above, Stuart King Architecture are sector leaders in developing sustainable developments and the houses proposed for Wester Balhomie will exhibit a range of in-built energy conservation measures and also employ energy generation technologies to reduce the carbon footprint of this new housing cluster. Rather than regurgitate the Design Brief we can direct you to it to get all the details relating to the satisfactory compliance with policies ER1 And ER1A.

CONCLUSION

The proposal to erect 4 detached houses at Wester Balhomie is wholly compliant with the terms of the policies enshrined in the LDP and LDP2. The SPGs relevant to this proposal have also been given credence. The design of the houses is exceptional, the sustainability of the development is high and there is a pledge to ensure the woodland landscape is managed for continuous cover and habitat creation. We strongly commend this planning application to Perth and Kinross Council.

Anne Cunningham MRTPI

Lowland Planning Associates.

PLANNING SUPPORTING STATEMENT

ERECTION OF 4 HOUSES AT WESTER BALHOMIE, CARGILL, PERTHSHIRE

APPLICANT: JIM TAIT, FREEWHEELIN' Ltd

ARCHITECTS: CRAIG SUTHERLAND/EUAN MILLER ,STUART KING ARCHITECTURE

PLANNING CONSULTANT: ANNE CUNNINGHAM, LOWLAND PLANNING ASSOCIATES

SETTING THE SCENE

The valley of the River Tay north of Perth is exemplified by countryside estates, productive farmland and small villages, which are historically closely related to their neighbouring estates. Estate management has always incorporated a strong landscape structure , with policy woodland being a predominant feature alongside a scatter of cottages which would have housed the gamekeeper, forester, ghillies and other staff. The Victorian and early Edwardian period saw areas such rural Perthshire flourish through the creation of these estates . Those managed landscapes have left a wonderful legacy which must be respected and they provide the template for future development. The sphere of influence of the nearby C listed Scots Baronial Balhovie House, with it's turrets and arabesque windows, stretches from the banks of the Tay southwards towards the planning application site at Wester Balhovie. It is in this spirit of the innovation that has created the high quality, attractive landscape and built environment that exists here that visionary approach now provides the inspiration for the creation of 4 stunning and environmentally sustainable houses at Wester Balhovie. It is so important that as an area evolves the history and landscape is respected. However, contemporary design is crucial. Preservation and mothballing , whether of a building or landscape can do a disservice to the art of design and the way people live today. Development opportunities such as this are rare and only a special design resolution will suffice.

PLANNING HISTORY

The application site has benefitted from a Permission in Principle and a detailed planning permission for a single, large, house granted in 2014 but has remained undeveloped. Those permissions have therefore lapsed. (14/00661/IPL and 14/02131/FUL). The policy justification for allowing this new house in the countryside was the fact that the site had been previously developed, albeit with an old bothy, and the fact that the design employed was of high quality and would have no negative effects on the area as a whole. The Development Plan policies on which the previous permissions were granted remain extant and relevant. The bothy has now gone and what remains is a bare field of tussocky grass. The woodland

surrounding this field on 3 sides did not come into play in that previous planning proposal. The delegated report associated with application 14/02131/FUL made reference to the broadleaved woodland only as it providing a screen to the new house. This is not an rationale that we agree with as development, particularly in a sensitive rural setting, should be of such high quality that it should not have to be mitigated by hiding behind trees. The trees of course do provide a wonderful setting for any development and in the case of our new proposals the woodland is fundamental.

THE PROPOSAL

Stuart King Architecture, with Jim Tait of Freewheelin' Ltd. and Lowland Planning have prepared a planning application for 4 detached houses where the site and setting dictate what is presented to Perth and Kinross Council. Unlike the previous permissions the applicant who owns the policy woodland surrounding the site , and whilst the application site itself is a bare field in the main, Jim Tait is giving a committment to managing the woodland, something that has not taken place for decades. We now have a holistic approach to development here. There is no cherry-picking. Developing the bare ground and ignoring the rest is not on the agenda.

The architects have prepared a design statement to accompany this application. The house plans also speak for themselves and are exceptional. The firm specialises in built-in sustainability of buildings and as well as being contemporary in design , using natural materials, they are very much breaking the mould by going far and beyond the energy conservation requirements of current building standards.

There are 2 house types presented here. Each is located in a large plot , some of which will incorporate mature trees (which will of course be protected during development). Traditional rural housing design in Scotland tends to follow a few 'rules'. Here is no different in that the designs incorporate steeply pitches roofs, have a vertical emphasis on the windows and be rather strong and solid in character. But they also have a finesse and use a palette of materials that look right in their countryside setting. Stone, wood, slate - the houses will grow out of the land and not merely be placed on it.

Over-engineering of access roads and the use of suburban fencing for boundary treatments is forbidden. They will not look good. The way the site is lit to avoid light pollution is important. This can be achieved by low or bollard style lights. Agri-spec post and wire fencing with native species hedging (hawthorn, blackthorn, dog rose) and stone walling are all acceptable ways of differentiating the fues. The emphasis is on greening the site so that in time the houses will melt into the woodland landscape. Hard transitional zones from plot to woodland edge must be resisted.

PLANNING POLICY POSITION

There is a positive residential planning history associated with the Wester Balhomie site. However, it is noted that only a few Local Development Plan (LDP) policies were cited as pertinent to that previous decision. In addition to the policies on Placemaking , Developer Contributions and Housing in the Countryside recorded in the Handling Report there is a raft of other Council planning policies and guidance that ensures that the proposal conforms to the Development Plan and satisfies Sections 25 and 37 (2)of the Town and Country (Scotland)Act 1997. We are aware that the adopted LDP 2104 has been

reviewed and LDP2 is through the Examination Period. We give material weight to the revised LDP2 and primacy to the adopted 2014 LDP. There is also new draft Supplementary Planning Guidance (SPG) covering Housing in the Countryside, replacing the adopted 2012 SPG on the same. Also recently reviewed are the Forestry and Woodland Strategy, Landscape and Renewable and Low Carbon Energy. All those SPGs came into play when developing our rural housing cluster.

The relevant LDP policies are:-

- Policy PM1A - Placemaking
- Policy PM3 - Infrastructure and Contributions
- Policy PM1C - Design Statements
- Policy RD3 - Housing in the Countryside
- Policy NE3 - Biodiversity
- Policy NE2A - Forestry, Woodlands and Trees
- Policy ER1A - Renewable Energy and Low Carbon Developments and Energy Conservation
- Policy ER6 - Landscape Management
- Policy EP1 - Climate Change, Carbon Reduction and Sustainable Construction

This proposal will be assessed for its compliance with those policies in turn.

Policy PM1A - Placemaking

Placemaking has been the mantra of the Royal Town Planning Institute (RTPI)for the last few decades. This is simply a word that encapsulates the need for planning proposals to ' be right for the site.' The latter is Lowland Planning's mantra.

The planning profession has these days to take into account a multitude of factors in assessing development schemes. It is not simple, but it is thorough. In the case of Wester Balhovie, it is the setting of the site relative to the surrounding woodlands that allows the proposal to be ' right '. As explained above and in the design statement, it was essential that we respected the 'place'. The house plans reveal the ambition of the developer and his team to make sure that the housing cluster is a benign development. We have judged it to be so and indeed, in the ethos of positive planning, it provides an opportunity to ensure that the future of the woodland (and hence the landscape) is protected and enhanced. Policy PM1A is satisfied.

Policy PM3 - Infrastructure and Contributions

It is the norm for planning authorities to levy financial contributions for local facilities, particularly schools. Freewheelin' Ltd. are conscientious developers and will of course ensure any contributions that are either imposed or negotiated are paid on the grant of planning permission. These can be secured by either a Section 69 or a Section 75 Agreement.

This rural site will not be difficult to service. There is already, for example, an electricity supply to the site. A detailed SuDS plan will ensure environmentally sound surface water dispersal. Access roads are all Suds compliant too. The vehicular access onto the A93 is already there, and this will be improved to allow even safer access/egress to the site. There will, visually, be little change.

It should be noted that when the original single house was approved, there were no adverse comments from consultees. It is therefore anticipated that despite there being 4 houses with this proposal, we will not receive any negative comments from those same consultees. Policy PM3 is satisfied.

Policy PM1A - Design Statements

Stuart King Architecture have provided a design statement to accompany the application. It is comprehensive and allows the Planning Authority to see behind the scenes of the proposal. They are leaders in sustainable development and energy conservation in the built environment and they go above and beyond the current building standards requirements. The Design Statement dovetails with this planning statement.

Policy RD3 - Housing in the Countryside

This is arguably the pre-eminant planning policy against which rural housing is assessed. It is essential that we, collectively, regard development in the countryside as special. Rural housing clusters and small settlements such as nearby Cargill are common in rural Perthshire and they create a living countryside and have established communities. The draft SPG on Housing in the Countryside welcomes good new development that can add to and not detract from the rural landscape. The fact that our site at Wester Balhomie is in a ready-made woodland landscape is of great benefit and this fact was crucial to the previous planning permission. It must be repeated here that good quality, innovatively designed buildings should not have to be hidden. If a building is unattractive or not right for the site it does not merit approval regardless of being able to hide it or not. In this instance we are taking the opportunity to manage the woodland for the future. The trees are a very big bonus though.

We believe that all the reasons why the previous house was granted still stand. The slight increase in numbers is, in sustainability terms, makes the best use of this site. There is space for a low-density development. In amenity terms the site is perfect for these family homes. Each has large gardens and significant separation to ensure privacy and residential amenity is maintained. Site servicing is not greatly increased, there is no additional visual impact on the area through the fortunate presence of an extensive woodland asset and it really would be splitting hairs to say 1 is fine but 4 is not. It's common sense and the right way to add to the rural housing stock in Perthshire. As stated above, this County has a very vibrant rural housing scene and this development will fit very well with this tradition. This proposal, like the original permission of 2014, fully complies with the Housing in the Countryside policy

and the 2012 and 2019 SPGs on the same.

Policy NE3 - Biodiversity

All new planning proposals should of course take the natural environment into account. This can be easier in the countryside, but it still needs a developer to help boost the fauna and flora of their sites (and surroundings) in rural areas. Wester Balhombie presents a great opportunity to provide new habitats and protect and enhance what's there. We are in this paper waxing lyrical about the policy woodlands and this obviously brings the most obvious locus for nature conservation and enhancement. More shall be discussed on the woodlands below.

However, it is the intention of our team to ensure that the application site itself, which at present is pretty much a green desert, also brings forth new opportunities to create habitats and enhance the biodiversity of the area. In addition to new garden grounds being established there will be a significant amount of new native species hedging along plot boundaries which of course is extremely favourable for attracting song birds. The gardens will effectively flow and merge with the broadleaved woodland and this will link the built environment to the surrounding habitats that already exist in the trees. A green corridor is the aim. The policy on biodiversity is satisfied.

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CONCLUSION

The proposal to erect 4 detached houses at Wester Balhomie is wholly compliant with the terms of the policies enshrined in the LDP and LDP2. The SPGs relevant to this proposal have also been given credence. The design of the houses is exceptional, the sustainability of the development is high and there is a pledge to ensure the woodland landscape is managed for continuous cover and habitat creation. We strongly commend this planning application to Perth and Kinross Council.

Anne Cunningham MRTPI

Lowland Planning Associates.

LOWLAND PLANNING ASSOCIATES, STUART KING A&D and FREEWHEELIN' Ltd

RESPONSE TO EMAIL FROM JOANNE FERGUSON, PERTH and KINROSS DEVELOPMENT MANAGEMENT TEAM, KATRINA WALKER, PLANNING POLICY TEAM and PAUL KETTLES, TREE OFFICER.

APPLICATION NO. 20/01197/FLL

ERECTION of 4 HOUSES at LAND SE. of BROADGREEN, CARGILL (WESTER BALHOMIE)

This paper is intended to form part of the above planning application(20/01197/FLL. It is a more formalised response to both the telephone conversation with the case officer and a follow up email summary email of 06/11/2020. This will be added to the online file via eplanningscotland and emailed to relevant officers.

Our agent had a detailed conversation with the case officer early on the 6th November 2020 and the agent in turn briefed the client and myself on that discussion. We are grateful to the Development Management Team and the Policy official, who fed into the email response. However, this still leaves our team as confused as ever on the thought processes behind what was said during, in particular, the telephone conversation.

The path of this application has at least benefitted from scrutiny from the case officer and internal consultees. This is in stark contrast to the 2019 application for the same development which we had to withdraw.

It appears that the whole site is now being recognised by PKC as rural brownfield land, by virtue of the proof provided by Dan Henderson and myself a week or so ago. It has been stated that the level of contamination on the site is 'not severe enough'. This is totally subjective and guesswork on the part of the Council and there is no reference at all in the Houses in the Countryside policy or in the HICS SPG that states what is an acceptable or unacceptable level of contamination. The 2nd Supporting Statement clearly explains why our expert, and us as a team, do strongly believe the site is not 'naturalising' well. The vegetation is a clear indicator of that fact. We have always been sure of the brownfield land aspect of this proposal and this was continually disputed until an expert in that field was brought in to give an opinion. Had this factor been accepted (as it is clear to see) we could have had the opportunity to conduct a Contaminated Land Survey (CLS) early doors. The officer has stated that she doesn't want us to 'go to the additional expense' at this late stage in the process. We are only days before the proposal is being put on the Delegated List for refusal. Had the brownfield land debate been accepted by the Council at an early stage, perhaps this last minute impasse could have been avoided and we could have had a contamination level measured which could have been assessed by the Council's Environment specialists. We repeat, our expert, due to his long and distinguished career and experience, has stated that there will be heavy metals and poisons on this land. We must remember that the extant application for a residence on the site was accepted for it's

brownfield credentials without a CLS being required. Housing, whether for 1 or 4 units is a highly-sensitive landuse and the Council did not object to residential property being built on the site a few years back. Was that an error? After all, the long-established Contaminated Land (Scotland) Act still defines what is and isn't brownfield and contaminated land as it did in 2014/15 when the single house was approved.

This brings us to the part of the telephone discussion between the case officer and our agent when the subject of the 'volume' of sites being built on brownfield land in PKC is increasing to a level that is unacceptable to the Planning Authority. The writer, as the Chartered Town Planner in our team, has always been proud that our profession seeks to present an even playing field to all applicants for planning permission. We can be satisfied that all planning policies and guidance have been rigourously consulted upon by stakeholders, the Scottish Government, the elected Members and the public. However, despite no changes to the Local Development Plan or the HITC SPG 2020, it was stated, by the case officer, that rural brownfield land should not be developed because there are too many sites in this category and the planning team have been guided (by, we presume, DM Managers) to refuse them. Without a formal, consulted and approved change to policy, this is 'ultra vires'. It withdraws the right to a proper and unambiguous assessment of this and other planning proposals. That, in short, is illegal. It has been discouraging throughout our dealings with PKC Planning that we cannot get our professional and expert opinion reasonably heard in this case. Perhaps we now know why?

As we have intensively argued throughout this process, we are trying to use this land sustainably. We were told that 1 house (on a large site) is fine, but 4 is not. This flies in the face of sustainability! Given that the house designs, energy conservation and generation measures, materials, the great opportunity for home-working and the perfect position of the site in a woodland setting are all in line with PKC policy and guidance. The fact that brownfield land should be given priority over greenfield sites is strongly encouraged in all Council areas of the Country and PKC Planning's approach leaves our team more than confused. This is national planning policy and the emerging National Planning Framework 4 (NPF4) and the new Planning (Scotland) Act will be heavily weighted towards using land that has been previously developed. This will apply to all brownfield sites, regardless if they are contaminated or not. The discouragement of building houses on rural brownfield land really is an unsustainable position.

During the conversation with our agent, the case officer stated that perhaps we should try to put together a proposal for a tourism development. The Council, she states, are more welcoming of such developments on green or brownfield sites in the countryside and they have policy backing. No mention was made of our site being contaminated as an inhibiting factor, and as this was not discussed when this advice was being proffered, one can reasonably assume that this is not a significant matter. This type of project could be glamping, cabins, or time-share type businesses. What is confusing about this particular advice is that it conflicts with the extant planning permission for a single house on the site. It renders that effectively redundant. Of course such a tourism development is by its nature a high traffic generator, it is a development that is likely to generate a lot of noise as families or hens/stags etc. are enjoying the facilities and there will of course be outdoor recreation in the evenings around BBQs and fire-pits. So instead of 4 lovely, sustainable, family homes we can have a field of structures that by design are likely not to have an enduring presence. They can only expect to stay functional for around a decade, until like our houses

which will indeed have a permanence that the temporary structures can never have. From previous experience of cabin developments etc. we can expect them to be upgraded/modernised as fashions change and because they fail because of the Scottish weather, around every 10 years. This is not a sustainable way to create a maturing sense of place and we cannot understand the rationale of allowing tourism in place of housing. If it goes down to an economic argument the local spending, the local Council Tax payments, the school contributions and the viability of the intake of those schools should be very welcome to Council indeed and that is what a high quality development will bring to Perth and Kinross.

We will take this opportunity to state that a tree constraints plan/mitigation plan will also be lodged on the portal at the earliest opportunity. We will show the Development Platform on each plot and, if we have to, either move the house positions or reduce the number of units to 3, to exclude the trees, we shall do so. We are extremely aware of how precious an asset the trees closer to the housing and the wider woodlands are. We do not wish to fell trees to accommodate development. If any trees are dangerous that is different, but no felling shall take place without consulting the tree officer.

To conclude, we will expect this paper and the tree constraints/mitigation plan to form part of the documents referred to in the Report of Handling. If we still end up appealing this application to the LRB, we will of course present all the supporting documentation to Members for their de novo consideration of the proposal.

Anne Cunningham MRTPI

with SKAD and Freewheelin' Ltd.

November 7th 2020

DEVELOPMENT & ENVIRONMENTAL SERVICES LIMITED

11 October 2020

Anne Cunningham
Lowland Planning Associates Limited
5 West Terrace
Blackness
Linlithgow
EH49 7NN

Dear Ms Cunningham,

Proposed 4 No Houses at Land 350m SE of Broadgreen, Cargill PH2 6DS

We refer to your instruction to provide our opinion on the above site regarding possible land contamination and whether the site constitutes “Rural Brownfield Land” – with particular reference to the Category 6 definition at page 24 of the SPG entitled “Housing in the Countryside”.

Definition of Rural Brownfield Land

For the purposes of this Guidance “Rural Brownfield Land” is defined as: Derelict Land which was at one time occupied by buildings or structures but these have now been removed, or land directly linked to former buildings or structures which has been so damaged by a former use that it cannot be left to naturalise or be reused for another purpose without first being improved.

Site Study

A study of historic O.S. mapping reveals that the site was shown as “Wester Balholmie” on the first edition of O.S. maps (c.1860) – so was built on/developed prior to that – and comprised a house with 2 outbuildings and a boiler.

The 1901 map is similar with the addition of a well and another outbuilding, or perhaps an enclosure, shown. There are no other larger scale maps until 1959 – when the house is still shown with one of the outbuildings gone.

O.S. name books for Perthshire state that the Wester Balholmie property comprised a dwelling house with offices and a pendicle attached. It was part of the very large Stobhall Estate and owned by Lord Willoughby, an Aristocrat with extensive property interests in Lincolnshire and Perthshire. Our Desk Top Study also reveals that in 1953 much of the Estate, including Wester Balholmie, was sold- at which time it was described as a 7 acre smallholding including a cottage and a steading, with an old Barn; a timber and iron woodstore; a hen house; a timber and iron Open Implement Shed (with tenants); and a well. The house and almost all of the outbuildings were demolished in the

early 1960's. The Open-Ended Implement shed was the only building remaining and it was demolished in 2015.

The attachment includes mapping, photos and documents that show that the site has previously been developed and is brownfield.

We visited the site and carried out a site walkover on 10 October 2020. We walked from the junction with the A93 along the access track bottomed out with whinstone and entered the site at the gate at the SW corner.

The site sloped gradually from the south to the north and was surrounded by mature trees/woodland. The large open area of the site was covered in weed growth with several humps and with areas of varied growth and height visible. We traversed the site several times, including into the wooded areas, and noted the ground was often uneven and irregular underfoot and that some of the humps were large pile or smaller deposits of rubble or other debris that were overgrown with weeds. We were unable to identify the position of the water well. The land was disused, had clearly been neglected for a long period of time and was in generally poor condition.

Conclusions

The site was at one time occupied by buildings that have been removed; the land was directly linked to the former buildings; the land is currently derelict, in poor condition and cannot be reused without first being improved; we consider rubble and remnants from the former buildings still remain on the site - including the footings, former materials arising from demolition, the well and probably a cesspool or similar underground structure. Accordingly, we are in no doubt that the site meets the criteria of "Rural Brownfield Land" as stated at Category 6 of the SPG entitled Housing in the Countryside.

Given the foregoing we also conclude there is the possibility of contamination from filled ground.

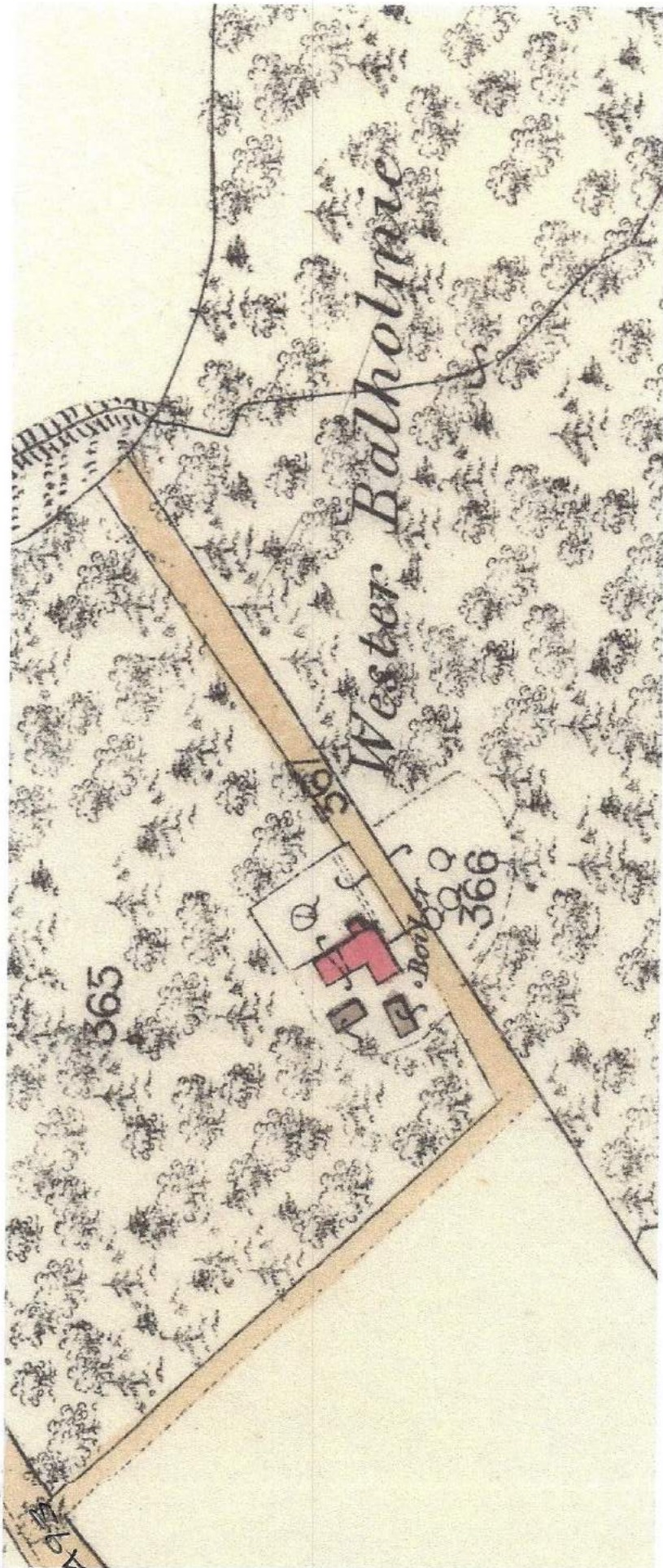
Lastly, the site has most recently been used as an "Open Implement Shed" in the context of either agriculture or timber shed activities. Depending on the precise use there could be risk of contamination – for example from herbicides or pesticides (if the shed was used for implements such as crop sprayers); or from timber treatment activities (if the shed was used for applying preservatives to fence posts etc).

We trust these comments are helpful.

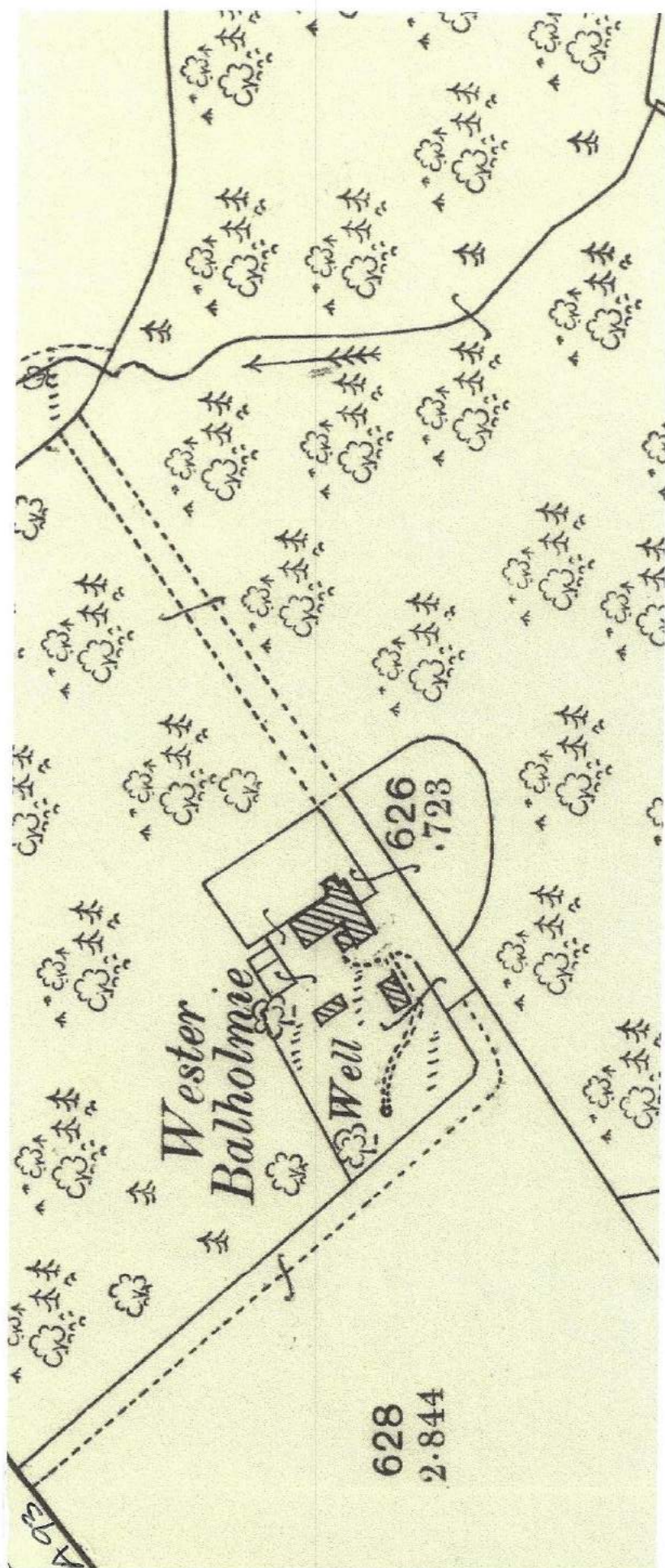
Dan Henderson BSc(Hons) MREHIS MCIWM
Development and Environmental Services Limited.

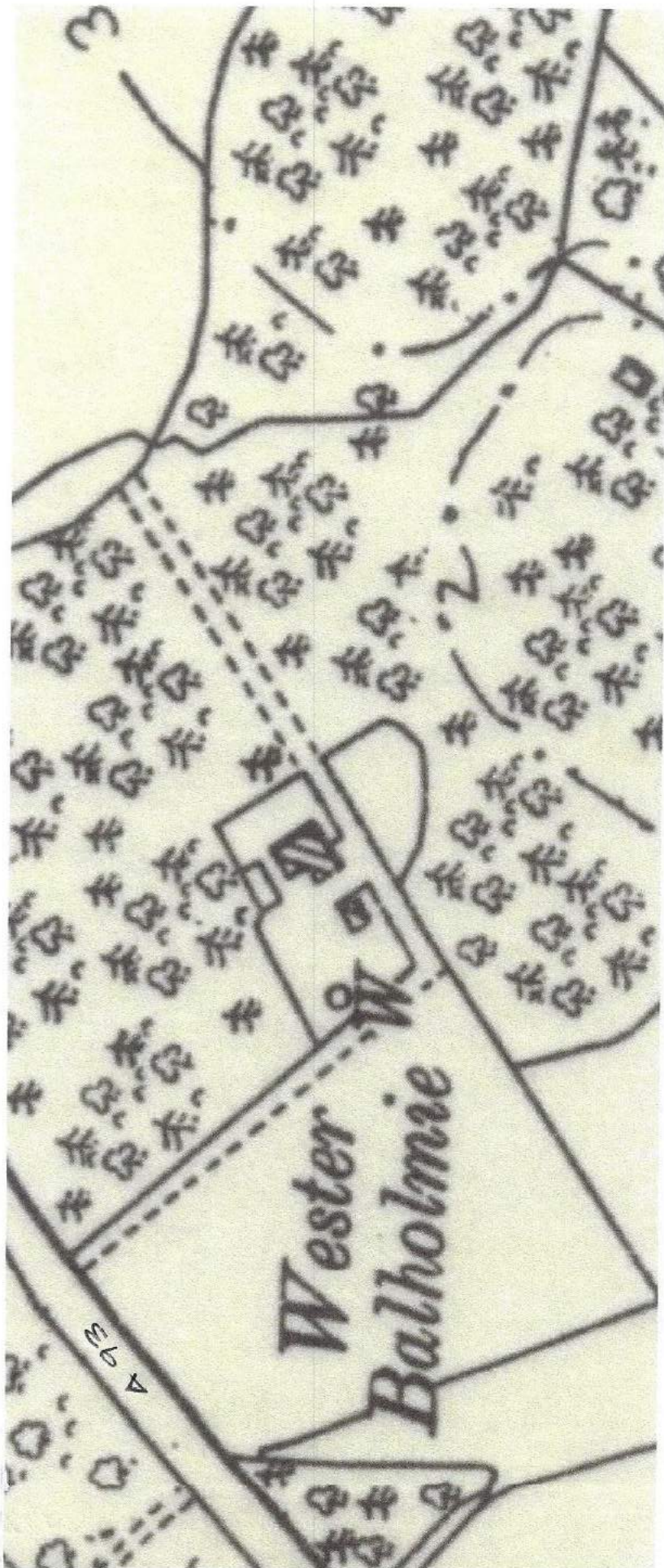
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EMAIL:desltd@outlook.com

Registered in Scotland Company No. SC 322297



1863/66





1959

OS1/25/15/15

No. 24
Parish of Cargill, Pethshire

List of Names as written on the Plan	Various modes of Spelling the same Names	Authority for those modes of Spelling	Situation	Descriptive Remarks, or other General Observations which may be considered of Interest
<i>Balthornie</i> ²	<i>Balthornie</i> <i>B.</i> <i>B.</i> <i>Balthornie</i> <i>Balthornie</i>	<i>W. S. Macbeth, as usual</i> <i>Sal. Roll</i> <i>W. Scott, sec.</i> <i>Statute Map</i> <i>W. S. Macbeth, as usual</i> <i>W. S. Macbeth, as usual</i> <i>W. S. Macbeth, as usual</i> <i>W. S. Macbeth, as usual</i>	<i>74-6-5</i>	<i>A farmhouse and offices, property of Lord Mellingham, D. C. C.</i>
<i>Cargill</i> ²	<i>Cargill</i> <i>C.</i> <i>C.</i>	<i>W. S. Macbeth</i> <i>Rev. W. S. Macbeth</i> <i>Statute Map</i>	<i>74-6-5</i>	<i>A small scattered village situated in the south of the parish, on the banks of the River Tay, comprising the parish church, Manse, & several dwellinghouses a little to the south back, property of Lord Mellingham.</i>
<i>Broadgreen</i>	<i>Broadgreen</i> <i>B.</i> <i>B.</i>	<i>James Haggart, sec.</i> <i>W. S. Macbeth</i> <i>Statute Map</i>	<i>74-6-5</i>	<i>A farmsteadings, vegetable garden, etc., property of Lord Mellingham.</i>
<i>Weston Balthornie</i> ²	<i>Weston Balthornie</i> <i>B.</i> <i>B.</i> <i>Weston Balthornie</i> <i>Balthornie</i>	<i>W. S. Macbeth</i> <i>Sal. Roll</i> <i>W. Scott, sec.</i> <i>Statute Map</i> <i>W. S. Macbeth, as usual</i>	<i>74-6-6</i>	<i>A dwellinghouse, with offices & garden, property of Lord Mellingham, D. C. C.</i>

Open in new window

Download

Transcription

List of names as written	Various modes of spelling	Authorities for spelling	Situation	Description remarks
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BALHOLMIE	Balholmie Balholmie Balholmie Balwhummy Balholmie Balholmie Balholmie	Mr. J. Macbeth, resident factor Stobhall Val. [Valuation] Roll Mr. Scott occr. [occupier] Estate Map Revd. [Reverend] R. H. Scott Ph. [Parish] Minister for Caputh Revd. [Reverend] W. C. Rose Ph. [Parish] Minister for Cargill Revd. [Reverend] R. Leisham Ph. [Parish] Minister for Clunie	074	A farmhouse and offices, property of Lord Willoughby D. Eresby
CARGILL [village]	Cargill Cargill Cargill	Mr. J. Macbeth Rev. [Reverend] William Rose, Cargill Valuation Roll	074	A small scattered Village situated in the west of the parish on the banks of the River Tay, comprising the parish Church, Manse, & several dwelling houses a little to the South East, property of Lord Willoughby
BROADGREEN	Broadgreen Broadgreen Broadgreen	James Haggart occr. [occupier] Mr. J. Macbeth Estate Map	074	A farmsteading Vegetable garden attached, property of Lord Willoughby.
WESTER BALHOLMIE	Wester Balholmie Wester Balholmie Wester Balholmie Wester Balwhummy Wester Balhomie Wester Balhomie	Mr. J. Macbeth Val. [Valuation] Roll John Scott, occr [occupier] Estate Map Mr. Ferguson Schoolmaster L. Kennedy Esqr. Land Agent	074	A dwelling house with offices & pendicle attached, property of Lord Willoughby D. Eresby



OPEN ENDED IMPLEMENT SHED JUST PRIOR TO
DEMOLITION C. FIVE YEARS AGO

SITE AT "NESTER BALHOLMIE" nr GARGILL
PERTSHIRE PH2 6DS

1/6

Daniel Henderson
to Daniel Henderson

Sun 11 Oct 14:45

Fw: Wester Balholmie vacant/derelict land

Sent from Windows Mail

From: Dan Henderson
Sent: Sunday, 11 October 2020 11:26
To: desltd@outlook.com



Photo 1. Site viewed from SW corner looking to NE



Photo2. Site looking from NE corner looking to SW

1/7



Photo3. Pile of rubble overgrown with weeds/moss.



Photo 4. More rubble overgrown with weeds.

Sent from my iPad

BLEBO TREE

Surgery



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Kilgour Steading
Falkland
Fife KY15 7AE
Mobile: 07866479416
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Adam Riedi-
Tech.Cert.
Arbor.A

BS 5837 Tree Survey Report

Proposed development site,
Cargill,
PH2 6DU

27/11/2019

A. C. Riedi Arb. Assoc. Tech. Cert. Arbor A.
Arboricultural Contracting & Consultancy

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Part One

General introduction

Client brief

Mr Craig Sutherland, Architect, contacted us to carry out a pre-development tree survey, in accordance with BSI 5837: 2012, *“Trees in relation to design, demolition and construction-Recommendations”*.

The purpose of the survey is to establish the constraints and opportunities in integrating structures and services into the existing tree population and is submitted to comply with LPA conditions.

Consequently, having had the tender accepted, Blebo Tree Surgery carried out an arboricultural survey and the findings are presented within this report.

The author and surveying team – qualifications and experience

Adam Riedi holds the Arboricultural Association Technicians Certificate, and also holds the LANTRA Professional Tree Inspection Certificate. He has been working in the industry since 1995 as both a contracting and consulting arborist. As part of a continuing professional development programme, he is currently working towards the Royal Forestry Society Professional Diploma in Arboriculture.

Mr Riedi was the Secretary of the Scottish Branch of the Arboricultural Association where his role included the organisation of seminars and events. In May 2010 he chaired a seminar given by world-leading tree expert Professor Claus Mattheck (Institute of Materials Research, Karlsruhe University, Germany). He has demonstrated modern ultra-sound decay detection techniques at a number of events and colleges. In 2014, he chaired a seminar on ‘trees and the law’ where the principal speakers were Dr David Lonsdale and Jeremy Barrell.

In 2011 he attended a visual tree assessment elite field training course held in Germany with Professor Claus Mattheck.

In 2012 Mr Riedi was asked to join an international research group researching trees, wood-decay fungi and ultrasound diagnostics with tree consultants and leading academics from the UK, Holland, Germany and Switzerland.

In 2015, Mr Riedi has advised the National Tree Collection of Scotland on tree management at several of their sites. He has also advised a number of Scottish Universities on integrating new buildings into the existing valuable and historic tree collections.

Aims of the arboricultural survey

- To collect arboricultural measurements and calculations pertaining to and required by the British Standards Institute (BSI) publication BSI 5837: 2012, "*Trees in relation to design, demolition and construction-Recommendations*" which will aid in quantifying the opportunities and constraints to proposed development.
- To provide an assessment of the hazards posed by the tree population and quantify the associated risk to create a defensible strategy for individual tree management.
- To prioritise and specify remedial work and, where necessary, more detailed investigation, to deal with potential hazards observed during individual tree assessment.
- To attempt to preserve the amenity value of the landscape, while managing the conflicts that may arise with respect to the client's duty of care.
- To create a tree constraints map by plotting tree position, tree category, tag number and crown spread on a licensed mapping tile. This will be exported as a DXF and PDF file

Summary

The proposed site is situated in a clearing within a wooded area to the south east of the A93 and is accessed from a dirt road leading directly from the A93.

The site is mostly flat ground sloping steeply to the north east at the north eastern edge of the clearing and has moderate Exposure to the prevailing south westerly winds.

The individual trees surveyed largely consist of mature and early mature *Fagus sylvatica* (common beech), *Quercus robur* (common oak) and *Betula pendula* (silver birch) in moderate and moderate-poor structural condition.

In phase one of the survey there where a high number of trees identified as likely to be affected by the proposed development and subsequently Blebo tree surgery were requested to carry out a second phase of surveying on the site.



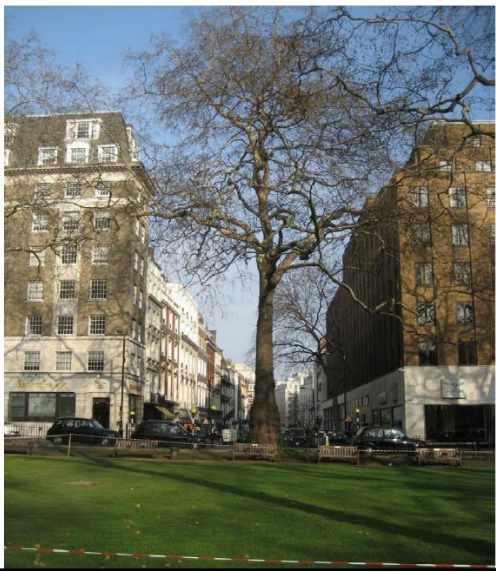
The importance of trees in the built environment

Urban trees confer many benefits to urban spaces and those who use them.

There are many well documented structural benefits; storm water management, reduction in UV light, shading, cooling of the air and removal of harmful pollutants and particulates from the air around trees.

An attractive and healthy tree population can also add significant financial value to a property which is obviously of key importance to developers, home owners and estate agents.

As the photographs below illustrate, trees also soften and compliment urban architectural and landscape designs and give scale, form and beauty to our streets and public spaces.



Images reproduced with permission of Martin Kelly, Capita Symonds, London

A resilient and well maintained tree population is also a link with the natural world which might otherwise be lacking in city life. The diversity of forms, colour and seasonal variation has tangible benefits for the physical and mental wellbeing for those who use this “green infrastructure”.

Trees and development-an introduction

The purpose of this process is to identify the nature and quality of existing tree cover and highlight the opportunities and constraints to development activity and the resultant permanent structures.

Good quality and sustainable tree cover is an essential component of green infrastructure and confers many benefits to society and can have considerable landscape, ecological and cultural values. Equally, the tree population should not pose unacceptable risk or nuisance to home owners and their homes. Design and implementation of new structures should be realistic about what is achievable, leave no significant impact on the condition of retained trees and create new structures and spaces with good “liveability”.



The tree survey and tree constraints plan should therefore be regarded as a design tool for the project architect and engineers.

A project arboriculturalist who can advise, as well as specify and supervise works, is an essential part of any successful development team on sites where trees exist. A high level of communication between architects, contractors and an arboriculturalist should ensure a realistic and sustainable outcome for both living trees and new structures.

The tree survey should be carried out and considered prior to any detailed design work and should be submitted to the Local Planning Authority as part of the initial planning application. Trees on development sites should not be conditioned in the planning process as this undermines the role of trees in the process and is in breach of the statutory duty of the Local Planning Authority to consider tree protection and re-planting.

This tree survey document should allow the design team, with the assistance of the project arboriculturalist, to reach a number of objectives.

- Present a tree retention/removal plan
- Present a strategic soft and hard landscaping design, including planting.
- Present an arboricultural impact assessment that quantifies direct and indirect effects of the proposed design on the tree population.

Reserved matters and meeting planning conditions

- Present plans and methods for the alignment of utilities.
- Present a tree protection plan that shows the position of root protection areas, protective barriers, ground protection and work exclusion zones.
- Present a detailed arboricultural method statement that details the precise method of tree protection to be used.
- Present a detailed hard and soft landscape design.



PART TWO

Tree survey and tree management recommendations



Visual tree assessment (VTA) - an introduction

A tree can be defined as a self-optimising bio-mechanical structure of lightweight design.

Its form is a consequence of available light, load adaptive growth and circumstances set within the context of its own genetic abilities and constraints.

A tree (when functioning normally) will respond to increased load, either caused by a specific structural defect or by a direct increase in wind and gravitational load, by preferentially depositing adaptive growth tissue in the affected areas. This model is described as the axiom of uniform stress (axiomatic, as it cannot be absolutely proven or disproven).

The VTA Level 1 (ground level, visual assessment only) system can, therefore, make reasonable inferences about the tree's internal condition on the basis of external appearance.

Assessment of vigour and vitality is an appraisal of biological function, which is the driver of all processes within the tree including adaptive growth and reaction to wounding and invasion by pathogens. Excessive biological function, such as long phototropic branches seeking light, may disrupt this aspiration towards mechanical self-optimisation.

Biology and mechanics should be seen as both separate and intimately co-dependent processes. Examples of trees that seem to represent the duality of the bio-mechanical nature of trees may often be observed.

A tree may bear a crown of normal size, density and foliar condition and yet the main stem may be 90% hollow and extremely prone to failure.

Equally, a tree may be intact and structurally sound, free of decay and other major structural defects, but may have poor vitality and its biological function may be declining fast.

The tendency of trees to form weak structures (such as compression forks and other mechanically non-optimised structures) or their ability to resist pathogens and external loads is coded within the genetic make-up of every individual tree species. Despite this fact, trees must be viewed as unique individuals growing in unique circumstances.

The form and position of the tree is also assessed for intrinsic stability. Stem and crown morphology, oscillation under wind and gravitational load, exposure and altered exposure, and tree group dynamics are all considered, along with the likely shear strength and structure of the soil.

The condition of the tree can then be put into the context of a tree risk paradigm. The three components of risk are: the probability of foreseeable mechanical failure (condition), the magnitude of mechanical failure (size of the defective part) and the consequences of mechanical failure (people and property and other things perceived to be valuable).

Finally, the value of the tree (ecological, botanical, landscape) is weighed against the risk of harm and the cost and practicality of any remedial work.



Work specified to reduce unacceptable risk from individual trees to be within an acceptable threshold is given a priority rating based on time from the issue of the report. Remedial work may take the form of complete tree removal, varying degrees of pruning, cable bracing or reduction of the target rating.

For trees that will be retained a re-inspection date is also stated. Trees are dynamic organisms living in a highly dynamic environment, so a regular re-inspection cycle is required. It is also worth remembering that tree condition may improve as well as deteriorate. Good adaptive growth, compartmentalisation of wood decay fungi and other defensive and adaptive strategies may overcome an episodic lapse of condition. Environmental factors and pathogens may become more or less severe and frequent.

Further inspection (VTA Level 2) is recommended in the initial Level 1 survey when it is not possible to evaluate the presence, extent or severity of a defect visually and from ground level. Examples of further inspection include such measures as the aerial inspection of a suspected defect, decay mapping using diagnostic tools or the sampling of affected foliage for laboratory analyses.

Further inspection would not be reasonably employed with low value and low risk trees, or as a substitute for a lack of competency with VTA 1.

The duty of care of the tree owner is not reasonably discharged unless further inspection is carried out within the stated time scales.

Good further inspection should quantify the extent and severity of any defect and help to avoid unnecessary tree removal or pruning, as well as negligent tree management through inaction.

Methodology

The VTA (visual tree assessment) system was used to evaluate the physiological and structural condition of each tree.

The VTA system was used together with the QTRA (quantified tree risk assessment) system for recording target values. On occasion, the QTRA system was used to calculate a precise risk of harm for a particular tree. Elements of the tree STATICS system were also used.

A nylon *Thor* hammer and manual probe were employed for simple decay detection.

Tree heights were measured using the *trupulse* laser hypsometer system.

The tree constraints plan was made using a geo-referenced topographical mapping tile of the area and a mobile mapping GPS unit, which together with a *trupulse* laser collected the on-site data. The resulting plan shows the tree position, tag number, tree quality, crown spread and root protection area. The plan is made available in DXF and PDF format as a separate file and document.

The phase one survey begins at tree tag number 801 and ends with tree tag number 816 and consists of 16 individual trees. The second phase begins at tree tag number 301 and ends with tree tag number 431 and consists of 130 individual trees.

It is understood the report is in support of a planning application. Therefore, measurements and calculations pertaining to and required by the British Standards Institute (BSI) publication BSI 5837: 2012, "*Trees in relation to design, demolition and construction-Recommendations*" have been taken.

No direct comment is made within this report upon the suitability of any development proposals and the likely impact of proposed development on the tree population of this site. This is because the pre-development tree survey is essentially an aid to design that highlights the opportunities for and constraints upon development posed by the tree population.

The field work for the phase one survey was carried out on the 24th of October 2019 under reasonable working conditions. The field work for the phase two survey was carried out on the 27th of November 2019 under reasonable working conditions.

Tree selection method

These trees were selected on the basis of the client brief only.

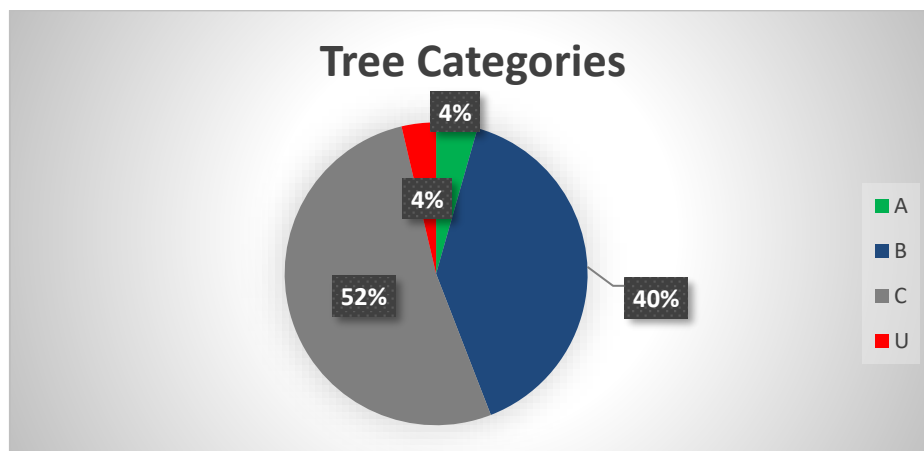
OBSERVATIONS

Introduction

No direct comment is made within this report upon the suitability of any development proposals and the likely impact of proposed development on the tree population of this site. This is because the pre-development tree survey is essentially an aid to design that highlights the opportunities for and constraints upon development posed by the tree population.

The majority of the trees are in moderate structural condition and normal health.

The tree quality category of these trees has been summarised in the table below. Please see [Appendix 4](#) for further explanation of the tree quality category assessment process.



The survey was carried out under reasonable working conditions with reasonable visibility.

The tree population is comprised of broad-leaved trees that are both native and exotic in origin. The planting date of the trees are not known by the author but it is probable that the majority of the trees were planted in the latter half of the 19th century and first half of the 20th century or are of self-seeded origin.

Target

The areas of the site surveyed are zoned as QTRA 2 to 5. This is based upon the regularity of pedestrian and vehicular traffic.

Felling

14 trees are recommended for complete felling.

Pruning

12 trees are recommended for pruning.

Further inspection

2 trees require further inspection

Re-inspection

It is recommended that trees should have an initial re-inspection cycle of 12 months. Should the target rating increase the risk from the tree population should be immediately reviewed by a competent arboriculturalist.

RECOMMENDATIONS



Recommendations in relation to proposed construction

- The root protection area for every tree surveyed has been recorded and shown on the Tree Constraints Plan (TCP). The TCP is a layout design tool indicating the minimum around a tree deemed to contain sufficed roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as priority.

Restrictions within tree protection areas

Inside the exclusion area of the fencing, the following should apply:

- No mechanical excavation whatsoever
- No excavation by any other means without arboricultural site supervision
- No hand digging without a written method statement having first been approved by the project arboriculturist
- No alteration of levels for any purpose (except the removal of grass sward using hand tools)
- No storage of plant or materials
- No vehicular access
- No storage or handling of any chemical including cement washings

Further precautionary measures are necessary adjacent to trees:

- No substances harmful to tree health, including fuels, oil, bitumen, cement (including cement washings), builders sand concrete mixing and other chemicals should be used or stored within the root protection area.
- No fire shall be lit that allows flames within 5 metres of tree foliage or within the root protection area.

General tree protection recommendations

The following considerations should be planned for:

- Plant and material delivery
- Landscaping
- Construction works
- Utility installation
- Demolition
- Soil stripping

Once constructed in situ, no tree protection measures will be removed or changed in any way without prior recommendation by the project arboriculturist and approval of the local planning authority.

Type 1 Tree protection barriers: This is suitable for areas of high intensity development, and should consist of interlocking weld-mesh panels, well braced to resist impacts by attachment to a scaffold framework that is set firmly into the ground.

Should an alternative method of barrier construction be requested, consultation with the project arboriculturist will be obtained to confirm the suitability of the revised design prior to informing the local planning authority and obtaining their consent.

Once the exclusion zone has been protected by barriers and/or ground protection, construction work may begin. All weather notices may be displayed on the barriers.

Ground protection

All ground protection installed must be capable of supporting the expected loads as well as protecting against compaction, rutting or damage to the soil.

Avoiding damage to stems and branches

Care shall be taken when planning site operations near to retained trees to ensure that wide or tall loads, or plant with booms, jibs and counterweights, operate without coming into contact with retained trees. If any such contact were to take place, serious injury to trees is risked which might make their safe retention impossible.

Therefore, any transit or traverse of plant near to trees shall be conducted under the supervision of a banksman, in order to ensure that the correct clearance from trees is at all times maintained. In some circumstances, it may be possible to achieve this without pruning work known as 'access facilitation pruning'

Access facilitation pruning shall be kept to the absolute minimum necessary to allow development and shall be carried out in strict accordance with the guidance below (Tree Surgery). Under no circumstances shall construction personnel undertake any tree pruning operations.

Tree surgery

Given that tree surgery is required, it will be carried out in accordance with BS 3998:2010 *Recommendations for Tree Work*, industry best practice and in line with any works already agreed with the Council.

Proof of experience and insurance provision will be required. All work shall be undertaken at the appropriate time and with the consent and approval of the Site Agent.

If bats or other protected flora or fauna, are discovered during tree work, advice should be obtained from Scottish Natural Heritage or other qualified persons and recommendations adhered to.

The contractor shall seek consent from the arboricultural consultant for the chosen Tree Surgeon to be used. All work shall be undertaken at the appropriate time and with the consent of the Site Agent who shall approve a programme of work.

The stumps of any trees removed from within the Construction Exclusion Zone or the RPAs of retained trees will be either; cut flush to ground level and treated with eco-plug translocated herbicide or ground using a stump grinder. They will not be winched out.

All operations shall be carefully carried out to ensure that damage to any trees being treated or neighbouring trees is avoided. Under no circumstance should retained trees be used for anchorage or winching purposes.

All arisings should be removed from site (unless other arrangements have been made) and the site left clean and tidy.

New planting and mitigation

Replacement tree planting should be implemented to off-set the impact of any tree losses during development. The decision of what species to plant should be left until the impact of the development on the local hydrology and topography is apparent.

Specifications for tree work

This section defines in more detail the specifications for the suggested courses of action advised within the tree schedule. All tree work should be carried out by qualified and insured arborists to the standards defined in the following document; British Standard Institution 3998: 2010, “Recommendations for tree work”.

Pruning

Dead wood management: removal, or shortening, of all dead branches from the crown of the tree.

Crown reduction: reduction of the height and/or lateral width of the crown of the tree. This can be an effective method of reducing the lever arm forces (wind and gravitational load) on the tree or individual limbs, thus compensating for bio-mechanical defects by improving the ratio of strength to mass.

Extreme crown reduction: this involves removal of a large proportion, or all, of the primary branches, and possibly, also the reduction in height of the principle stem. This can be appropriate on trees where structural defects are so severe that conventional pruning systems cannot hope to re-instate the ratio of strength to mass within tolerable limits. The physiological response of any individual tree is uncertain, and the success of the operation should be assessed annually. Some species and individuals may produce adventitious growth and continue to function as compact bio-mechanical structures. Other trees may not respond well and become standing dead wood. Any tree parts, or whole trees, that move to senescence have high ecological and habitat values but may constitute a hazard depending on their proximity to targets, so ongoing monitoring is essential. Coronet cuts can also be used to encourage niche habitats and adventitious growth. For more information see; **Read, H.** (2000) *Veteran Trees: A guide to good management*, English Nature, **BS 3998: 2010, Recommendations for tree work**, **Fay, N.** (2003) *Coronet Cutting and Retrenchment Pruning-Natural fracture pruning techniques*(www.treeworks.co.uk/press_releases_publications.php).

Fell or section fell: the removal of trees with significant structural defects or those trees that are in severe conflict with their context.

Further Inspection: this aims to clarify the presence, extent and severity of potential defects highlighted in the Level 1 survey. Inspection can vary from a simple aerial visual assessment by Arborists of potential defects that are hard to assess from ground level, through to decay mapping using Ultrasound Tomography.

Target reduction method: Valuable old trees with structural defects can sometimes be defensibly retained if the target rating is reduced. Target reduction measures may include fencing off trees, re-directing paths and use of barrier planting.

Cable bracing: The artificial restraint of branches and stems to prevent mechanical failure. Bracing can be specified as dynamic or static depending on the severity of the defect.

General tree management proposal

1. It is strongly advised that arboricultural recommendations made within this report are carried out within the appointed time scales. It is advised that a formal budget and schedule of work are created by the client. That can be done after consultation between the client, the arboricultural consultant and contractors.
2. That the legal status of the trees, the laws and guidelines covering tree management be respected and adhered to. Of particular importance are:
 - Trees in conservation areas: these are protected by ‘Town and Country Planning (Scotland) Act 1997’. Applications to carry out tree work should be made to the local planning authority.
 - Trees and the public road: ‘Roads (Scotland) Act 1994’ and amendments.
 - Protected flora and fauna: ‘Nature Conservation Act 2004’ (Scotland).
 - Felling licenses. Forestry Commission Scotland.
3. All arboricultural remedial work should be carried out to the standards defined in British Standard 3998 ‘Recommendations for tree work’: 2010, and be carried out by professional arborists with the relevant qualifications (level 3 or above) and public liability and employers insurance for arboriculture.
4. If any non-arboricultural work (e.g. path creation, maintenance) is planned, all work should adhere to the guidelines defined in British Standard 5837: ‘Trees in relations to construction – recommendations 2012’ in order to protect the trees from unnecessary damage. Any activity likely to affect the trees, above or below ground, within or out-with the area should be monitored and recorded. Work carried out by statutory undertaker’s out-with the site but potentially within the rooting zone of the trees, should be recorded and the implications for tree health and stability assessed.
5. That a qualified Ecologist be consulted prior to any tree work commencing, in order to advise on the likely impact on any protected flora and fauna.
6. In the event of site usage altering, the risk from trees should be re-evaluated in altered areas.
7. During periods of extreme weather, especially high winds (i.e. over 35 mph), it would be advisable to warn site users, including residents and employees, of the potential risks given the natural failure rate of trees under such conditions and close access to areas in close proximity to the tree population. A mechanism for measuring wind speed and closing areas with physical barriers should be formalised.
8. Should paths be upgraded, or new features like benches be installed, thought should be given to not only on not impacting on tree condition during construction of structures, but also to not unnecessarily raise the target rating of trees through a lack of strategic planning. Careful consideration should be given to the positioning of benches etc.

Limitations

- 1- The observations and recommendations contained within this document are valid for 6 months from the date of this report (29th November 2019). Given the dynamic and complex nature of living trees it is advised that regular tree inspections are maintained as stated in the tree schedule and after extreme weather.
- 2- This survey is based upon observations of the site as it currently exists.
- 3- Tree condition should be re-evaluated after extremes of weather that may affect the trees' health or stability. Alteration to the site and the context in which these trees grow will make it necessary to re-assess tree condition.
- 4- Only the trees with individual tree numbers fall within the scope of this survey.
- 5- The survey was carried out using the Visual Tree Assessment Level 1 (VTA) technique as defined by C. Mattheck (2003; 2007).
- 6- The survey was carried out from ground level and from within the site boundaries.
- 7- No soil, pathogen or tree samples were taken. No drilling or other decay detection devices were employed.
- 8- No detailed assessment of the rooting zone and below ground tree physiology was made.
- 9- Some measurements were estimated due to limitations imposed by the terrain.
- 10- Trees are dynamic and complex organisms and are subject to change. No long-term guarantee can be given as to the absolute safety of any tree.
- 11- Target ratings and zones were established on the basis of the site as it was observed. If the client, on the basis of frequent site visits, are able to observe that the target rating is higher than is stated then the hazard posed by the tree population should be upgraded and management recommendations reviewed.

PART THREE

Tree schedule

Key to tree schedule

Full term	Explanation
Tree Tag Number	Number on metal tag attached to the tree at approximately 2 meters above ground level.
Tree Species	Common English Name.
Age Class	<p>Young (up to the first 1/3rd of expected height).</p> <p>Semi-mature (1/3rd to 2/3rds of expected height),</p> <p>Mature (close to expected ultimate height with rapid girth expansion),</p> <p>Late-mature (at ultimate height and with slow girth expansion),</p> <p>Veteran (a valued tree surviving beyond the typical age for the species).</p>
Vigour	Physiological condition: Normal, Fair, or Poor
Summary of tree condition	<p>Good: Full healthy canopy; free from major cavities, wounds, pests or diseases. A tree of excellent shape and form.</p> <p>Moderate: Slightly reduced leaf cover or isolated sparse leaf cover, minor deadwood or isolated major deadwood; early stages of decay or disease; stable structural defects. A tree of reasonable shape and form.</p> <p>Poor: Overall sparse foliage; extensive deadwood; well-established decay organisms; cavities and or large wounds; structural defects prone to failure. A tree of distorted and imbalanced shape and form.</p> <p>Very Poor: Large areas of dead crown; advanced decay; structurally unsafe. A tree of very poor shape and form.</p> <p>Dead: Dead tree.</p>
Notes on the structural and physiological condition and its growing context.	Observations made using the level 1 Visual Tree Assessment system.

Full term	Explanation
Preliminary Management Recommendations	<p>Specified works that are recommended for the reduction of the identified hazard(s), or for further investigation.</p> <p>NWR = No Work Required</p> <p>PRUNING</p> <p>EXTREME PRUNING</p> <p>FELLING</p> <p>FURTHER INSPECTION</p> <p>CABLE BRACING</p>
Tree Quality Categorization as per BS 5838:2012	A,B,C OR U Category

Tag Number	Common name	Age Class	Vigour	Condition	Tree management recommendations	Tree Retention Category
301	Fagus sylvatica (common beech)	Mature	Normal	MODERATE Reasonable intact trunk. Tensile union at approximately 2 meters from ground level. multiple broken and hanging dead branches in otherwise largely defect free crown.	NWR	B
302	Quercus robur (common oak)	Mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free crown with medium sized deadwood throughout.	NWR	A
303	Quercus robur (common oak)	Dead	Dead	Dead	EXTREME PRUNING Reduce in height to leave trunk no higher than 5 meters and retain for habitat.	U
304	Fagus sylvatica (common beech)	Early mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free crown.	NWR	C
305	Fagus sylvatica (common beech)	Early mature	Normal	MODERATE POOR Dead aerial roots on lower trunk. Soil levels altered. Reasonable intact upper trunk supporting largely defect free crown.	NWR	U
306	Fagus sylvatica (common beech)	Mature	Normal	MODERATE Reasonable intact trunk. Co dominant stems arising from approximately 2.5 meters from ground level with tensile union. Largely defect free crown.	NWR	A
307	Fagus sylvatica (common beech)	Mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free crown with phototropic primary branches.	NWR	A
308	Quercus robur (common oak)	Dead	Dead	Dead	EXTREME PRUNING Reduce in height to leave trunk no higher than 3 meters and retain for habitat.	U
309	Quercus robur (common oak)	Early mature	Normal	MODERATE Reasonable intact trunk supporting asymmetric crown with some partially failed branches overhanging low target area.	NWR	B
310	Salix caprea (goat willow)	Early mature	Normal	MODERATE Three trunks arising from close to ground level with adequate compression fork unions. North western stem with small area of damage at approximately 2 meters from ground level. Largely defect free crown.	NWR	C
311	Salix caprea (goat willow)	Early mature	Normal	MODERATE Reasonable intact trunk with approximately 10 degrees lean to north supporting largely defect free crown.	NWR	C
312	Betula pendula (Silver birch)	Early mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free crown.	NWR	C
313	Betula pendula (Silver birch)	Early mature	Normal	MODERATE Two stems arising from close to ground level with adequate union. Reasonable trunks with minor wounds supporting largely defect free crown but with historic storm damage.	NWR	C
314	Quercus robur (common oak)	Mature	Normal	MODERATE Reasonable intact trunk with approximately 10 degrees lean to west. Largely defect free asymmetric crown with large diameter deadwood.	NWR	B
315	Quercus robur (common oak)	Mature	Normal	MODERATE Reasonable intact trunk with approximately 10 degrees lean to west. Largely defect free asymmetric crown with large diameter deadwood.	NWR	B

Tag Number	Common name	Age Class	Vigour	Condition	Tree management recommendations	Tree Retention Category
316	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown but with large diameter deadwood and hanging branches.	NWR	B
317	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown but with large diameter deadwood and hanging branches.	NWR	B
318	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
319	Quercus robur (common oak)	Early mature	Normal	MPerate Reasonable intact trunk. Co dominant stems arising from approximately 6 meters from ground level with adequate union supporting largely defect free crown.	NWR	B
320	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
321	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
322	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
323	Fagus sylvatica (common beech)	Early matur	POOR	POOR Two stems arising at approximately 2 meters from ground level. Both stems failed between 7 and 8 meters from ground level.	NWR	U
324	Fagus sylvatica (common beech)	Mature	Normal	POOR Reasonable intact trunk. Co dominant stems arising at approximately 5 meters from ground level supported by compression fork union with pointy adaptive growth. Reasonable upper trunks supporting largely defect free crown.	EXTREME PRUNING Reduce height of southern stem by approximately 7 meters	C
325	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact lower trunk. Cavitating wound to west at approximately 4 meters from ground level. Reasonable intact upper trunk supporting largely defect free crown with isolated small diameter deadwood.	NWR	B
326	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact trunk. Distorted upper trunk supporting largely defect free asymmetric crown.	NWR	C
327	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable trunk with approximately 10 degrees lean to east with minor wounds showing good wound wood formation. Largely defect free crown with isolated deadwood and historic storm damage.	NWR	B
328	Quercus robur (common oak)	Mature	Normal	Moderate POOR Reasonable intact lower trunk. Large tea rout wound to south from approximately 70cm to 3 meters from ground level with good wound wood formation. Large area of decay along primary branch to east with inadequate wound wood. Cavity in main stem at approximately 8 meters from	FURTHER INSPECTION Aerial inspection of cavity at approximately 7 meters from ground level.	A

Tag Number	Common name	Age Class	Vigour	Condition	Tree management recommendations	Tree Retention Category
				ground level. Asymmetric crown with phototropic primary branches and medium sized deadwood.		
329	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown with isolated deadwood and historic storm damage.	NWR	B
330	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	B
331	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	B
332	Quercus robur (common oak)	Early mature	Normal	Moderate Two stems arising from close to ground level with adequate union. Reasonable trunks with some minor un occluded pruning wounds supporting largely defect free asymmetric crown.	NWR	B
333	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable trunk with minor un occluded rib to north. Largely defect free crown with large diameter deadwood.	NWR	B
334	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free asymmetric crown with isolated deadwood.	NWR	B
335	Picea abies (Norway spruce)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
336	Picea abies (Norway spruce)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
337	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown with isolated medium diameter dead wood.	NWR	B
338	Picea abies (Norway spruce)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
339	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
340	Quercus robur (common oak)	Mature	Normal	Moderate POOR Reasonable intact lower trunk. Small cavity to west at approximately 3.5 meters from ground level with associated bulge wood. Partially failed branch at approximately 6 meters from ground level caught up in neighbouring tree. Otherwise, largely defect free crown with medium diameter deadwood.	PRUNING Remove partially failed branch to west.	B
341	Picea abies (Norway spruce)	Early mature	Normal	Moderate Reasonable intact trunk. Largely defect free suppressed crown.	NWR	C
342	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk with approximately 10 degrees lean to west supporting largely defect free asymmetric crown.	NWR	B
343	Larix decidua (European larch)	Early mature	Normal	Moderate Reasonable intact trunk with approximately 15 degrees lean to north supporting largely defect free crown.	NWR	C

Tag Number	Common name	Age Class	Vigour	Condition	Tree management recommendations	Tree Retention Category
344	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Historic partially failed root plate now apparently stable. Reasonable intact trunk with approximately 15 degrees lean to west supporting largely defect free asymmetric crown. Distorted upper form.	NWR	C
345	Fagus sylvatica (common beech)	Young	Normal	Moderate Minor broken canker to east at close to ground level. Reasonable intact upper trunk supporting largely defect free asymmetric crown.	NWR	C
346	Fagus sylvatica (common beech)	Young	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
347	Fagus sylvatica (common beech)	Young	Normal	Moderate Reasonable intact trunk supporting largely defect free asymmetric crown.	NWR	C
348	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Three stems arising from close to ground level with adequate compression fork unions. Reasonable intact trunks supporting largely defect free crown.	NWR	C
349	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown with large diameter deadwood overhanging access track.	PRUNING Remove deadwood 35mm> overhanging accesses track.	B
350	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
351	Fagus sylvatica (common beech)	Early mature	Normal	Poor Inadequate union at approximately 1 meter from ground level.	FELL Fell to ground level.	U
352	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk with approximately 10 degrees lean to west supporting largely defect free crown with isolated small diameter deadwood.	NWR	B
353	Fagus sylvatica (common beech)	Early mature	Normal	Poor Large area of decay to south.	FELL Fell to ground level.	U
354	Fagus sylvatica (common beech)	Mature	Normal	Moderate POOR Basal cavity to east. Reasonable intact upper trunk supporting largely defect free crown.	FURTHER INSPECTION Pcus ultrasound tomography at close to ground level.	C
355	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	B
356	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	B
357	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	B

Tag Number	Common name	Age Class	Vigour	Condition	Tree management recommendations	Tree Retention Category
358	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk with approximately 10 degrees lean to south west. Largely defect free crown with medium diameter deadwood, historic storm damage and phototropic primary branches.	NWR	A
359	Fraxinus excelsior (common ash)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
360	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown. Large diameter deadwood throughout.	NWR	B
361	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown with large diameter deadwood.	NWR	B
362	Picea abies (Norway spruce)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
363	Fraxinus excelsior (common ash)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
364	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Predominant surface roofing to north west. Reasonable intact trunk supporting largely defect free crown.	NWR	C
365	Fraxinus excelsior (common ash)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown. Isolated small diameter deadwood.	NWR	B
366	Betula pendula (Silver birch)	Early mature	Normal	Moderate Reasonable intact trunk with 15 degrees lean to south east. Largely defect free asymmetric crown.	NWR	C
367	Sorbus aucuparia (rowan)	Mature	Normal	Moderate Two stems arising from close to ground level with adequate union. Reasonable intact trunks supporting largely defect free asymmetric crown.	NWR	C
368	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk with approximately 10 degrees lean to south east. Largely defect free crown with isolated medium diameter deadwood.	NWR	B
369	Fraxinus excelsior (common ash)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
370	Fraxinus excelsior (common ash)	Early mature	Normal	Moderate Minor basal wound to north. Co dominant stems arising at approximately 1 meter from ground level with adequate union. Largely defect free asymmetric crown.	NWR	C
371	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free suppressed crown.	NWR	C
372	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown. Isolated small diameter deadwood and historic storm damage.	NWR	B

Tag Number	Common name	Age Class	Vigour	Condition	Tree management recommendations	Tree Retention Category
373	Fagus sylvatica (common beech)	Mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free crown.	NWR	B
374	Quercus robur (common oak)	Early mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free asymmetric crown.	NWR	C
375	Quercus robur (common oak)	Early mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free asymmetric crown.	NWR	C
376	Quercus robur (common oak)	Dead	Dead	Dead	NWR	U
377	Fraxinus excelsior (common ash)	Early mature	Normal	MODERATE Group 5 of Fraxinus excelsior (common ash) in moderate condition and normal health.	NWR	C
378	Picea abies (Norway spruce)	Early mature	Normal	MODERATE Reasonable trunk with minor partially occluded rib to west. Largely defect free suppressed crown.	NWR	C
379	Fagus sylvatica (common beech)	Early mature	Normal	MODERATE POOR Two stems arising from close to ground level with adequate union. Eastern stem with reasonable intact trunk. western most stem failed at approximately 1 meter.	PRUNING Remove failed stem leaving 1 meter stub.	C
380	Picea abies (Norway spruce)	Mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free crown.	NWR	C
381	Fraxinus excelsior (common ash)	Early mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free crown.	NWR	C
382	Salix caprea (goat willow)	Mature	Normal	MODERATE Historic root plate failure. Multiple upright stems arising from horizontal parent stem. Largely defect free crown. layering form.	NWR	C
383	Picea abies (Norway spruce)	Mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free crown.	NWR	C
384	Picea abies (Norway spruce)	Early mature	Normal	POOR Partially failed at ground level.	FELL Fell to ground level.	U
385	Picea abies (Norway spruce)	Mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free crown.	NWR	C
386	Quercus robur (common oak)	Early mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free suppressed crown.	NWR	C
387	Quercus robur (common oak)	Early mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free asymmetric crown with medium diameter deadwood.	NWR	B
388	Quercus robur (common oak)	Mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free asymmetric crown with large diameter deadwood.	NWR	B
389	Picea abies (Norway spruce)	Mature	Normal	MODERATE Reasonable intact trunk supporting largely defect free crown.	NWR	C

Tag Number	Common name	Age Class	Vigour	Condition	Tree management recommendations	Tree Retention Category
390	Quercus robur (common oak)	Early mature	Normal	Moderate Growing in close proximity to tree 397. Reasonable intact lower trunk. Trunk enveloped branch from neighbouring tree at approximately 2.5 meters from ground level. Reasonable intact bowing upper trunk supporting largely defect free asymmetric crown.	NWR	C
391	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown. Isolated medium diameter deadwood.	NWR	B
392	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free asymmetric crown with isolated deadwood.	NWR	C
393	Fraxinus excelsior (common ash)	Early mature	Normal	Moderate Group of approximately 10 early mature Fraxinus excelsior (common ash) in normal health and moderate structural condition.	NWR	C
394	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown. Large hanging branch in lower crown. Isolated small diameter deadwood.	NWR	B
395	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
396	Fagus sylvatica (common beech)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	B
397	Fagus sylvatica (common beech)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown with isolated small diameter deadwood.	NWR	B
398	Fagus sylvatica (common beech)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown. Phototropic primary branches.	NWR	A
399	Fagus sylvatica (common beech)	Early mature	Normal	Moderate POOR Large area of fire damage to east from close to ground level to approximately 3 meters with good wound wood formation. three stems arising from approximately 3 meters from ground level. Adequate unions supporting reasonable stems. Largely defect free crown.	NWR	C
400	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free asymmetric crown.	NWR	C
401	Betula pendula (Silver birch)	Mature	Normal	POOR Two stems arising from close to ground level. southern most stem failed. Decay coalescing from failed stem to remaining stem.	FELL Felled to ground level.	U
402	Fagus sylvatica (common beech)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	B
403	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown. large diameter deadwood in lower crown.	NWR	B

Tag Number	Common name	Age Class	Vigour	Condition	Tree management recommendations	Tree Retention Category
404	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown. large diameter deadwood in crown.	NWR	B
405	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable trunk with minor partially occluded ribs to north and east. Largely defect free crown with isolated deadwood and historic storm damage.	NWR	B
406	Quercus robur (common oak)	Early mature	Fair	Moderate Reasonable intact trunk supporting largely defect free sparse crown with frequent large diameter deadwood.	NWR	C
407	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown. Historic storm damage. large diameter deadwood in crown.	NWR	B
408	Fagus sylvatica (common beech)	Early mature	Normal	Poor Basal decay to south.	FELL Fell to ground level.	U
409	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown with some large diameter deadwood.	NWR	B
410	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	B
411	Fagus sylvatica (common beech)	Early mature	Normal	Moderate M8nor basal wound to south west with good wound wood formation. Reasonable intact trunk supporting largely defect free crown.	NWR	C
412	Fagus sylvatica (common beech)	Early mature	Normal	Moderate two stems arising from close to ground level. Reasonable intact trunks supporting largely defect free crown.	NWR	C
413	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown. Isolated medium diameter deadwood.	NWR	B
414	Quercus robur (common oak)	Young	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
415	Betula pendula (Silver birch)	Early mature	Normal	Moderate Two stems arising from close to ground level with adequate union. Reasonable trunks supporting largely defect free crown.	NWR	C
416	Quercus robur (common oak)	Young	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
417	Betula pendula (Silver birch)	Early mature	Normal	Moderate Historic loss of co dominant stem at close to ground level. Reasonable intact trunk supporting largely defect free crown.	NWR	C
418	Betula pendula (Silver birch)	Young	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
419	Quercus robur (common oak)	Young	Normal	Moderate Reasonable trunk with minor un occluded pruning wounds supporting suppressed crown.	NWR	C
420	Quercus robur (common oak)	Young	Normal	Moderate Reasonable trunk with minor un occluded pruning wounds supporting suppressed crown.	NWR	C

Tag Number	Common name	Age Class	Vigour	Condition	Tree management recommendations	Tree Retention Category
421	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown. Isolated small diameter deadwood.	NWR	C
422	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Multiple stems arising from close to ground level with adequate unions. Reasonable trunks supporting largely defect free asymmetric crown.	NWR	C
423	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable trunk with strip of decay to west form approximately 2 to 5 meters from ground level with good wound wood formation. distorted upper form. Largely defect free crown with isolated deadwood.	NWR	B
424	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
425	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	C
426	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown. large diameter deadwood in crown.	NWR	B
427	Quercus robur (common oak)	Dead	Dead	Dead	EXTREME PRUNING Reduce in height o leave trunks of no higher than 5 metres.	U
428	Larix decidua (European larch)	Mature	Normal	Moderate Reasonable intact sweeping trunk supporting largely defect free crown.	NWR	B
429	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown.	NWR	B
430	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Multiple stems arising from close to ground level with adequate unions. Reasonable intact trunks supporting largely defect free asymmetric crown.	NWR	C
431	Quercus robur (common oak)	Early mature	Normal	Moderate Reasonable intact trunk supporting largely defect free crown with large diameter deadwood.	NWR	B
801	Quercus robur (common oak)	Mature	Normal	Moderate Reasonable intact trunk supporting distorted asymmetric crown with frequent large diameter deadwood.	NWR	B
802	Quercus robur (common oak)	Mature	Normal	Moderate POOR Reasonable intact lower trunk. Two stems arising from approximately 2 metres from ground level. southern most stem with historic wound near union with limited woundwood formation. Northern most stem Reasonable and intact supporting largely defect free crown. Frequent large diameter deadwood. Hanging branch in lower crown to north.	PRUNING Reduce length of southern most stem by approximately 1.5 meter and remove hanging branch and unstable deadwood within 12 months	B
803	Fagus sylvatica (common beech)	Early mature	Normal	Moderate Reasonable intact lower trunk. Un occluded pruning wound to west at approximately 2 meters from ground level with good woundwood formation. Adequate compression fork union at approximately 4 meters from ground level. Largely defect free crown.	NWR	C

Tag Number	Common name	Age Class	Vigour	Condition	Tree management recommendations	Tree Retention Category
804	Quercus robur (common oak)	Dead	Dead	Dead	EXTREME PRUNING Reduce in height to leave stem no higher than 2 meters from ground level within 12 months	U
805	Quercus robur (common oak)	Early mature	Normal	MODERATE Reasonable intact lower trunk. Profuse epicormic growth on trunk up to approximately 12 meters from ground level. Largely defect free crown with isolated deadwood.	NWR	B
806	Fagus sylvatica (common beech)	Mature	Fair	MODERATE POOR Historic Removal of secondary small stem to west. Approximately 15 degrees lean to west. Area of xylem dysfunction to west from close to ground level to approximately 9 meters with mixed wound wood formation and fruiting bodies of <i>Oudemansiella mucida</i> (porcelain fungus) present. Largely defect free crown.	PRUNING Reduce crown height by approximately 2.5 meters and reduce crown width to west by approximately 2.5 meters within 6 months	B
807	Fagus sylvatica (common beech)	Early mature	Poor	POOR Partially failed at approximately 8 meters.	FELL Fell to ground level Removing snapped section from neighbouring tree within 6 months	U
808	Quercus robur (common oak)	Early mature	Normal	POOR Reasonable intact trunk. Adequate compression fork union at approximately 2.5 meters from ground level with large hanging branch caught in union. Dead stem to north east. southern stem with storm damage to upper crown.	EXTREME PRUNING Reduce in height to leave trunk no higher than 3 meters from ground level within 6 months	U
809	Quercus robur (common oak)	Early mature	Fair	MODERATE Reasonable trunk with minor cavity to north east at approximately 13 meters from ground level showing very good wound wood formation. Largely defect free crown with frequent large diameter deadwood.	NWR	B
810	Fraxinus excelsior (Common ash)	Early mature	Normal	MODERATE Reasonable intact sweeping trunk supporting largely defect free crown.	NWR	C
811	Quercus robur (common oak)	Early mature	Normal	MODERATE Distorted Intact trunk Supporting largely defect free asymmetric crown with isolated deadwood.	NWR	C
812	Quercus robur (common oak)	Early mature	Normal	POOR Multiple coalescing cavities at base. partially failed apical tip.	FELL Fell to ground level within 6 months	U
813	Quercus robur (common oak)	Early mature	Normal	MODERATE Reasonable intact trunk with 5 degrees lean to west. Profuse epicormic growth on trunk. Largely defect free crown with isolated deadwood.	NWR	B
814	Fagus sylvatica (common beech)	Mature	Normal	MODERATE POOR Pronounced buttress rooting to north east. Reasonable intact lower trunk. Distorted upper trunk with canker at approximately 10 meters from ground level. Largely defect free crown.	NWR	C
815	Fagus sylvatica (common beech)	Early mature	Normal	MODERATE Tree growing through neighbouring tree. Reasonable intact trunk with approximately 10 degrees lean to south east supporting suppressed crown.	NWR	C
816	Fagus sylvatica (common beech)	Mature	Fair	POOR Bundle planting. Two reasonable fused stems. Multiple large areas of xylem dysfunction in primary branches. Historic compression fork failure at approximately 9 meters from ground level. Phototropic primary branches.	EXTREME PRUNING Reduce crown height to leave stump no higher than 7 meters from ground level within 6 months	U

Tag Number	Common name	Age Class	Vigour	Condition	Tree management recommendations	Tree Retention Category
Group 1	NA	NA	NA	TBD Mixed coniferous and deciduous trees mainly consisting of mature and early mature <i>Fagus sylvatica</i> (common beech) and <i>Quercus robur</i> (common oak)	NA	NA
Group 2	NA	NA	NA	TBD Mixed coniferous and deciduous trees mainly consisting of mature and early mature <i>Fagus sylvatica</i> (common beech) and <i>Quercus robur</i> (common oak)	NA	NA
Group 3	NA	NA	NA	TBD Mixed coniferous and deciduous trees mainly consisting of mature and early mature <i>Fagus sylvatica</i> (common beech) and <i>Quercus robur</i> (common oak)	NA	NA
Group 4	NA	NA	NA	TBD Mixed coniferous and deciduous trees mainly consisting of mature and early mature <i>Fagus sylvatica</i> (common beech) and <i>Quercus robur</i> (common oak)	NA	NA
Group 5	NA	NA	NA	TBD Mixed coniferous and deciduous trees mainly consisting of mature and early mature <i>Fraxinus excelsior</i> (Common ash) and <i>Quercus robur</i> (common oak) and birch approximately 9 individuals.	NA	NA

DIMENSIONS

BS 5837: 2005 – TABLE 1 ROOT PROTECTION AREAS (RPA) AND ROOT PROTECTION RADIUS (RPR)

Key to dimensions table

Full term	Explanation
Tree Tag Number	Number on plastic tag attached to the tree at approximately 2 meters above ground level.
Height	Measured height in metres from ground level to growing tips.
Crown clearance	The distance from ground level in metres to the first significant branch
Diameter of stem	Recorded in millimetres at 1.5m height on the stem in accordance with Annex C of BS 5837:2012. In trees with multiple trunks the first 5 trunks are recorded. Trees with more trunks than 5 have the average diameter recorded.
Crown spread	The spread of the crown on all four cardinal points (north, east, south and west) measured in metres.
Root Protection Radius	A layout design tool indicating the minimum around a tree deemed to contain sufficed roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as priority. Expressed in metres.
Root Protection Area	As above but expressed as square metres (metres ²).

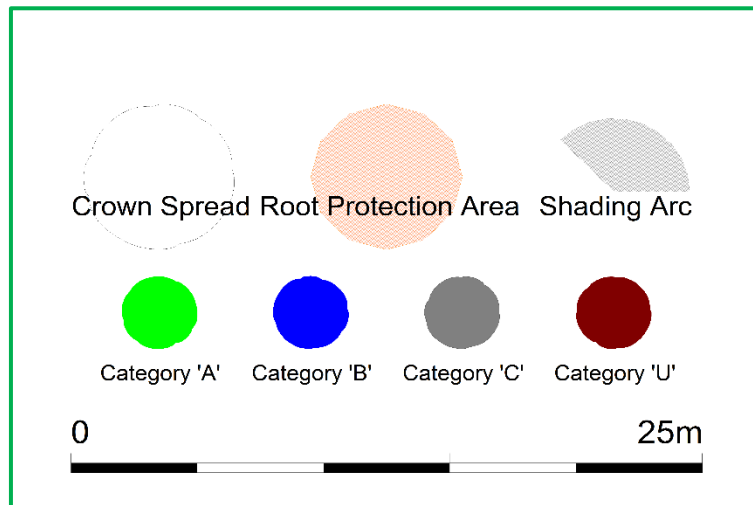
Tag	Height (m)	Crown clearance	Number of Stems	Stem 1 (mm)	Stem 2 (mm)	Stem 3 (mm)	Stem 4 (mm)	stem 5	Spread - N (m)	Spread - E (m)	Spread - S (m)	Spread - W (m)	RPR	RPA
301	19	1	1	850					9	6	4	3	10.2	326.9
302	18	8	1	810					9	4	1	6	9.7	296.9
303	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
304	9	1	1	260					5	2	4	6	3.1	30.6
305	12	1	1	280					5	5	2	5	3.4	35.5
306	20	7	1	730					3	8	8	8	8.8	241.1
307	20	1	1	990					6	8	6	9	11.9	443.4
308	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
309	16	2	1	490					6	7	6	5	5.9	108.6
310	12	2	3	300	320	200			1	3	3	3		
311	17	1	1	230					3	1	1	3	2.8	23.9
312	12	3	1	190					3	1	2	1	2.3	16.3
313	12	1	2	240	160				2	2	3	1		
314	16	4	1	720					6	0	2	10	8.6	234.5
315	16	2	1	580					5	2	5	9	7.0	152.2
316	20	8	1	670					6	5	6	7	8.0	203.1
317	17	8	1	530					4	1	1	5	6.4	127.1
318	10	1	1	250					4	1	4	4	3.0	28.3
319	18	8	1	460					4	2	2	4	5.5	95.7
320	18	2	1	400					4	3	4	4	4.8	72.4
321	19	7	1	490					5	3	4	6	5.9	108.6
322	18	3	1	360					6	4	5	4	4.3	58.6
323	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
324	21	6	1	660					7	6	6	6	7.9	197.1
325	20	10	1	520					6	1	2	3	6.2	122.3
326	20	2	1	450					9	4	1	6	5.4	91.6
327	20	8	1	700					10	7	6	1	8.4	221.7
328	18	3	1	1080					6	8	5	9	13.0	527.7
329	18	7	1	660					6	4	2	6	7.9	197.1
330	11	2	4	310	90	110	120		2	4	5	4	4.3	59.1
331	12	1	1	480					5	4	5	5	5.8	104.2
332	18	7	2	480	380				2	3	5	7	7.3	169.6
333	18	6	1	680					5	5	4	5	8.2	209.2
334	17	7	1	550					4	5	4	3	6.6	136.9
335	16	2	1	300					2	2	2	2	3.6	40.7
336	22	5	1	530					3	3	3	3	6.4	127.1
337	20	4	1	670					9	5	4	4	8.0	203.1
338	18	2	1	300					2	2	2	2	3.6	40.7
339	18	8	1	390					5	1	3	3	4.7	68.8
340	16	5	1	620					5	4	1	5	7.4	173.9
341	13	1	1	260					2	2	2	2	3.1	30.6
342	14	4	1	340					1	1	1	5	4.1	52.3
343	17	8	1	340					4	2	0	2	4.1	52.3
344	14	3	1	330					3	2	2	6	4.0	49.3
345	11	2	1	220					1	1	2	4	2.6	21.9
346	13	1	1	200					1	1	2	2	2.4	18.1
347	14	1	4	170	220	220	240		4	3	3	5	5.1	82.9
348	17	2	3	320	290	280			3	3	5	6	6.2	119.8
349	18	6	1	710					4	4	5	7	8.5	228.1
350	14	2	1	310					2	0	2	5	3.7	43.5

351	18	2	2	450	400				3	4	4	6	7.2	164.0
352	18	8	1	430					0	0	2	8	5.2	83.7
353	12	1	1	430					4	6	3	1	5.2	83.7
354	20	4	1	650					5	5	6	6	7.8	191.2
355	18	4	1	710					8	6	5	5	8.5	228.1
356	12	5	1	600					4	5	4	3	7.2	162.9
357	18	2	1	500					2	1	3	5	6.0	113.1
358	20	5	1	1050					8	9	14	9	12.6	498.8
359	14	5	1	250					0	3	6	3	3.0	28.3
360	18	3	1	710					7	2	6	6	8.5	228.1
361	18	6	1	650					8	5	7	7	7.8	191.2
362	22	2	1	940					5	5	5	3	11.3	399.8
363	17	4	1	280					1	1	3	1	3.4	35.5
364	10	1	1	270					5	3	3	4	3.2	33.0
365	18	2	1	690					3	3	5	9	8.3	215.4
366	8	2	1	210					3	5	2	3	2.5	20.0
367	10	2	2	300	270				4	4	0	4	4.8	73.7
368	16	1	1	610					4	9	5	6	7.3	168.4
369	16	5	1	310					2	3	6	1	3.7	43.5
370	14	5	2	280	320				2	4	7	2	5.1	81.8
371	10	2	1	260					1	0	4	4	3.1	30.6
372	16	1	1	550					4	6	7	7	6.6	136.9
373	19	1	1	870					4	6	9	7	10.4	342.5
374	14	2	1	380					4	2	4	3	4.6	65.3
375	14	1	1	380					2	2	5	3	4.6	65.3
376	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
377	15	7	Group	280					3	3	2	2	3.4	35.5
378	14	4	1	300					2	2	2	3	3.6	40.7
379	14	1	2	260	270				4	6	0	0	4.5	63.6
380	22	3	1	970					4	4	4	4	11.6	425.7
381	16	9	1	300					2	4	2	0	3.6	40.7
382	14	2	9	300					2	7	8	2	10.8	366.4
383	23	2	1	910					3	1	4	4	10.9	374.7
384	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
385	23	2	1	930					4	4	4	1	11.2	391.3
386	7	1	1	180					2	4	1	2	2.2	14.7
387	14	5	1	380					0	1	8	6	4.6	65.3
388	20	5	1	830					3	10	9	6	10.0	311.7
389	23	1	1	1010					5	5	5	3	12.1	461.5
390	15	7	1	360					2	0	0	7	4.3	58.6
391	20	1	1	540					1	7	6	5	6.5	131.9
392	9	4	1	220					5	1	0	2	2.6	21.9
393	14	5	Group	260									3.1	30.6
394	22	6	1	460					5	3	6	4	5.5	95.7
395	20	3	1	460					3	3	2	5	5.5	95.7
396	22	3	1	930					3	6	8	3	11.2	391.3
397	20	2	1	830					5	9	9	8	10.0	311.7
398	22	1	1	960					9	9	9	8	11.5	417.0
399	22	1	1	730					10	9	5	8	8.8	241.1
400	20	1	1	500					4	1	4	7	6.0	113.1
401	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
402	20	1	1	970					4	11	8	5	11.6	425.7

403	20	2	1	400					3	3	4	4	4.8	72.4
404	21	5	1	430					6	8	3	3	5.2	83.7
405	21	2	1	650					9	1	6	7	7.8	191.2
406	21	4	1	500					2	2	5	7	6.0	113.1
407	18	5	1	540					6	4	3	8	6.5	131.9
408	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
409	20	5	1	560					4	5	3	5	6.7	141.9
410	18	5	1	300					3	0	1	2	3.6	40.7
411	20	1	1	400					4	6	4	5	4.8	72.4
412	16	1	3	280	300	180			6	4	3	6	5.4	90.8
413	20	2	1	520					5	4	5	6	6.2	122.3
414	10	1	1	250					2	3	1	4	3.0	28.3
415	10	1	2	260	240				1	2	3	5	4.2	56.6
416	8	1	1	220					5	3	1	1	2.6	21.9
417	12	1	1	280					4	2	1	2	3.4	35.5
418	10	3	1	180					2	1	2	3	2.2	14.7
419	5	2	1	200					5	2	1	2	2.4	18.1
420	6	1	1	210					2	1	2	4	2.5	20.0
421	10	1	1	470					5	5	4	3	5.6	99.9
422	16	1	3	480	320	300			3	6	5	0	7.8	191.3
423	22	2	1	500					1	1	4	5	6.0	113.1
424	12	1	1	280					1	2	3	7	3.4	35.5
425	18	2	1	400					2	1	4	5	4.8	72.4
426	21	3	1	500					4	2	4	3	6.0	113.1
427	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
428	21	10	1	780					7	5	2	0	9.4	275.3
429	20	7	1	460					6	2	5	6	5.5	95.7
430	12	1	5	120	180	180	120	200	2	3	4	5	4.4	60.4
431	20	8	1	420					6	6	5	3	5.0	79.8
801	18	4	1	780					6	2	6	7	9.4	275.3
802	19	4	1	1000					5	3	6	8	12.0	452.4
803	16	2	1	490					4	3	3	5	5.9	108.6
804	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA
805	19	2	1	620					5	1	6	5	7.4	173.9
806	21	4	1	670					7	7	7	9	8.0	203.1
807	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA
808	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA
809	22	3	1	590					5	5	7	4	7.1	157.5
810	18	9	1	30					5	3	4	3	4.3	58.6
811	16	3	1	450					4	1	4	5	5.4	91.6
812	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA
813	16	3	1	420					3	4	4	2	5.0	79.8
814	20	2	1	670					5	4	6	6	8.0	203.1
815	15	2	1	430					2	4	4	4	5.2	83.7
816	22	1	1	1320					8	8	7	8	15.8	788.3

TREE CONSTRAINTS PLAN

Please see separate document



APPENDIX 1

GLOSSARY OF ARBORICULTURAL TERMS

Abscission. The shedding of a leaf or other short-lived part of a woody plant, involving the formation of a corky layer across its base; in some tree species twigs can be shed in this way

Abiotic. Pertaining to non-living agents; e.g. environmental factors

Absorptive roots. Non-woody, short-lived roots, generally having a diameter of less than one millimetre, the primary function of which is uptake of water and nutrients

Adaptive growth. In tree biomechanics, the process whereby the rate of wood formation in the cambial zone, as well as wood quality, responds to gravity and other forces acting on the cambium. This helps to maintain a uniform distribution of mechanical stress

Adaptive roots. The adaptive growth of existing roots; or the production of new roots in response to damage, decay or altered mechanical loading

Adventitious shoots. Shoots that develop other than from apical, axillary or dormant buds; see also 'epicormic'

Age class. A means of classifying the trees current position in its expected life cycle. This is often classified as; young, early mature, mature, over mature, veteran, dead.

Anchorage. The system whereby a tree is fixed within the soil, involving cohesion between roots and soil and the development of a branched system of roots which withstands wind and gravitational forces transmitted from the aerial parts of the tree

Architecture. In a tree, a term describing the pattern of branching of the crown or root system

Arisings. All branch, stem wood, foliage, etc. that has been produced as a result of tree pruning or felling operations

Axil. The place where a bud is borne between a leaf and its parent shoot

Bacteria. Microscopic single-celled organisms, many species of which break down dead organic matter, and some of which cause diseases in other organisms

Bark. A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex and periderm; occasionally applied only to the periderm or the phellem

Basidiomycotina (Basidiomycetes). One of the major taxonomic groups of fungi; their spores are borne on microscopic peg-like structures (basidia), which in many types are in turn borne on or within conspicuous fruit bodies, such as brackets or toadstools. Most of the principal decay fungi in standing trees are basidiomycetes

Bolling. A term sometimes used to describe pollard heads

Bottle-butt. A broadening of the stem base and buttresses of a tree, in excess of normal and sometimes denoting a growth response to weakening in that region, especially due to decay involving selective delignification

Bracing. The use of rods or cables to restrain the movement between parts of a tree

Branch:

- **Primary.** A first order branch arising from a stem
- **Lateral.** A second order branch, subordinate to a primary branch or stem and bearing sub-lateral branches
- **Sub-lateral.** A third order branch, subordinate to a lateral or primary branch, or stem and usually bearing only twigs

Branch bark ridge. The raised arc of bark tissues that forms within the acute angle between a branch and its parent stem

Branch collar. A visible swelling formed at the base of a branch whose diameter growth has been disproportionately slow compared to that of the parent stem; a term sometimes applied also to the pattern of growth of the cells of the parent stem around the branch base

Brown-rot. A type of wood decay in which cellulose is degraded, while lignin is only modified

Buckling. An irreversible deformation of a structure subjected to a bending load

Buttress zone. The region at the base of a tree where the major lateral roots join the stem, with buttress-like formations on the upper side of the junctions

Cambium. Layer of dividing cells producing xylem (woody) tissue internally and phloem (bark) tissue externally

Canker. A persistent lesion formed by the death of bark and cambium due to colonisation by fungi or bacteria

Canopy species. Tree species that mature to form a closed woodland canopy

Cavity. A void in the tree's structure. This is normally caused by the activity of wood decay fungi

Cleaning out. The removal of dead, crossing, weak, and damaged branches, where this will not damage or spoil the overall appearance of the tree

Co-dominant (crown class).

Co-dominant (stems or branches). Two branches or stems of equal size that have arisen from 2 apical buds at the tip of the same stem. This is often associated (depending on genetic and circumstantial factors) with an inclusion of bark which may cause a point of mechanical weakness

Compartmentalisation. The confinement of disease, decay or other dysfunction within an anatomically discrete region of plant tissue, due to passive and/or active defences operating at the boundaries of the affected region

Compression strength. The ability of a material or structure to resist failure when subjected to compressive loading; measurable in trees with special drilling devices

Compressive loading. Mechanical loading which exerts a positive pressure; the opposite to tensile loading

Condition. An indication of the physiological vitality of the tree. Where the term ‘condition’ is used in a report, it should not be taken as an indication of the stability of the tree

Construction exclusion zone. Area based on the Root Protection Area (in square metres) to be protected during development, by the use of barriers and/or ground protection

Coppicing. A process whereby, following the cutting of a tree stem close to ground level, adventitious buds develop over time into stems arising from the parent stump

Crown/Canopy. The main foliage bearing section of the tree

Crown lifting. The removal of limbs and small branches to a specified height above ground level

Crown thinning. The removal of a proportion of secondary branch growth throughout the crown to produce an even density of foliage around a well-balanced branch structure

Crown reduction/shaping. A specified reduction in crown size whilst preserving, as far as possible, the natural tree shape

Crown reduction/thinning. Reduction of the canopy volume by thinning to remove dominant branches whilst preserving, as far as possible the natural tree shape

Deadwood. Branch or stem wood bearing no live tissues. Retention of deadwood provides valuable habitat for a wide range of species and seldom represents a threat to the health of the tree. Removal of deadwood can result in the ingress of decay to otherwise sound tissues and climbing operations to access deadwood can cause significant damage to a tree. Removal of deadwood is generally recommended only where it represents an unacceptable level of hazard

Decurrent. In trees, a system of branching in which the crown is borne on a number of major widely-spreading limbs of similar size (cf. excurrent). In fungi with toadstools as fruit bodies, the description of gills which run some distance down the stem, rather than terminating abruptly

Defect. In relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment

Delamination. The separation of wood layers along their length, visible as longitudinal splitting

Dieback. The death of parts of a woody plant, starting at shoot-tips or root-tips

Disease. A malfunction in or destruction of tissues within a living organism, usually excluding mechanical damage; in trees, usually caused by pathogenic micro-organisms (especially wood decay fungi)

Distal. In the direction away from the main body of a tree or subject organism (cf. proximal)

Dominance. In trees, the tendency for a leading shoot to grow faster or more vigorously than the lateral shoots; also the tendency of a tree to maintain a taller crown than its neighbours

Dormant bud. An axial bud which does not develop into a shoot until after the formation of two or more annual wood increments; many such buds persist through the life of a tree and develop only if stimulated to do so (for example, by pruning and or increased light levels)

Dysfunction. In woody tissues, the loss of physiological function, especially water conduction, in sapwood

DBH (Diameter at Breast Height). Stem diameter measured at a height of 1.5 metres (UK) or the nearest measurable point. Where measurement at a height of 1.5 metres is not possible, another height may be specified

Epicormic shoot. A shoot having developed from a dormant or adventitious bud and not having developed from a first year shoot

Excrecence. Any abnormal outgrowth on the surface of tree or other organism

Excurrent. In trees, a system of branching in which there is a well defined central main stem, bearing branches which are limited in their length, diameter and secondary branching (cf. decurrent)

Felling. The process of cutting a tree down, to a point near ground level, in a controlled way. This is a course of remedial action with the intention of permanently removing a tree.

Felling licence. In the UK, a permit to fell trees in excess of a stipulated number of stems or volume of timber

Flush-cut. A pruning cut which removes part of the branch bark ridge and or branch-collar

Girdling root. A root which circles and constricts the stem or roots possibly causing death of phloem and/or cambial tissue

Guying. A form of artificial support with cables for trees with a temporarily inadequate anchorage

Habit. The overall growth characteristics, shape of the tree and branch structure

Hazard beam. An upwardly curved part of a tree in which strong internal stresses may occur without being reduced by adaptive growth; prone to longitudinal splitting

Heartwood/false-heartwood/ripewood. Sapwood that has become dysfunctional as part of the natural aging processes

Incipient failure. In wood tissues, a mechanical failure which results only in deformation or cracking, and not in the fall or detachment of the affected part

Included bark (ingrown bark). Bark of adjacent parts of a tree (usually forks, acutely joined branches or basal flutes) which is in face-to-face contact

Increment borer. A hollow auger, which can be used for the extraction of wood cores for counting or measuring wood increments or for inspecting the condition of the wood

Infection. The establishment of a parasitic micro-organism in the tissues of a tree or other organism

Internode. The part of a stem between two nodes; not to be confused with a length of stem which bear nodes but no branches

Lever arm. A mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or an individual branch

Lignin. The hard, cement-like constituent of wood cells; deposition of lignin within the matrix of cellulose microfibrils in the cell wall is termed Lignification

Lions tailing. A term applied to a branch of a tree that has few if any side-branches except at its end, and is thus liable to snap due to end-loading

Loading. A mechanical term describing the force acting on a structure from a particular source; e.g. the weight of the structure itself or wind pressure

Longitudinal. Along the length (of a stem, root or branch)

Minor deadwood. Deadwood of a diameter less than 25mm and unlikely to cause significant harm or damage upon impact with a target beneath the tree

Mulch. Material laid down over the rooting area of a tree or other plant primarily to help conserve moisture; a mulch may consist of organic matter or a sheet of plastic or other artificial material

Occluding tissues. A general term for the roll of wood, cambium and bark that forms around a wound on a woody plant (cf. woundwood)

Occlusion. The process whereby a wound is progressively closed by the formation of new wood and bark around it

Pathogen. A micro-organism which causes disease in another organism

Picus sonic tomography. A diagnostic technology which creates a two dimensional picture of a trees cross section by measuring the velocity of a series of ultra-sound pulses which are sent, and received, from a number of sensors (usually eight to twelve in number) which are placed around the trees circumference

Pollarding. The removal of the tree canopy, back to the stem or primary branches. Pollarding may involve the removal of the entire canopy in one operation, or may be phased over several years. The period of safe retention of trees having been pollarded varies with species and individuals. It is usually necessary to re-pollard on a regular basis, annually in the case of some species

Primary branch. A major branch, generally having a basal diameter greater than 0.25 x stem diameter

Primary root zone. The soil volume most likely to contain roots that are critical to the health and stability of the tree and normally defined by reference to BS5837 (2005) Trees in Relation to Construction Recommendations

Priority. Works may be prioritised, 1. = high, 5. = low

Probability. A statistical measure of the likelihood that a particular event might occur

Proximal. In the direction towards from the main body of a tree or other living organism (cf. distal)

Pruning. The removal or cutting back of twigs or branches, sometimes applied to twigs or small branches only, but often used to describe most activities involving the cutting of trees or shrubs

Radial. In the plane or direction of the radius of a circular object such as a tree stem

Reactive Growth/Reaction Wood. Production of woody tissue in response to altered mechanical loading; often in response to internal defect or decay and associated strength loss (cf. adaptive growth)

Removal of dead wood. Unless otherwise specified, this refers to the removal of all accessible dead, dying and diseased branchwood and broken snags

Removal of major dead wood. The removal of, dead, dying and diseased branchwood above a specified size

Respacing. Selective removal of trees from a group or woodland to provide space and resources for the development of retained trees.

Residual wall. The wall of non-decayed wood remaining following decay of internal stem, branch or root tissues

Root-collar. The transitional area between the stem/s and roots

Root-collar examination. Excavation of surfacing and soils around the root-collar to assess the structural integrity of roots and/or stem

Root protection area. An area of ground surrounding a tree that contains sufficient rooting volume to ensure the tree's long term retention, close to optimal physiological and structural condition. Calculated with reference to BS5837 (2005)

Root zone. Area of soils containing absorptive roots of the tree/s described. The **Primary** root zone is that which we consider of primary importance to the physiological well-being of the tree

Sapwood. Living xylem tissues

Secondary branch. A branch, generally having a basal diameter of less than 0.25 x stem diameter

Selective delignification. A kind of wood decay (white-rot) in which lignin is degraded faster than cellulose

Shedding. In woody plants, the normal abscission, rotting off or sloughing of leaves, floral parts, twigs, fine roots and bark scales

Silvicultural thinning. Removal of selected trees to favour the development of retained specimens to achieve a management objective

Simultaneous white-rot. A kind of wood decay in which lignin and cellulose are degraded at about the same rate

Snag (stub). In woody plants, a portion of a cut or broken stem, branch or root which extends beyond any growing-point or dormant bud; a snag usually tends to die back to the nearest growing point

Soft-rot. A kind of wood decay in which a fungus degrades cellulose within the cell walls, without any general degradation of the wall as a whole

Sprouts. Adventitious shoot growth erupting from beneath the bark

Stem/s. The main supporting structure/s, from ground level up to the first major division into branches

Stress. In plant physiology, a condition under which one or more physiological functions are not operating within their optimum range, for example due to lack of water, inadequate nutrition or extremes of temperature

Stress. In mechanics, the application of a force to an object

Stringy white-rot. The kind of wood decay produced by selective delignification

Structural roots. Roots, generally having a diameter greater than ten millimetres, and contributing significantly to the structural support and stability of the tree

Subsidence. In relation to soil or structures resting in or on soil, a sinking due to shrinkage when certain types of soil dry out, sometimes due to extraction of moisture by tree roots

Subsidence. In relation to branches of trees, a term that can be used to describe a progressive downward bending due to increasing weight

Taper. In stems and branches, the degree of change in girth along a given length

Target canker. A kind of perennial canker, containing concentric rings of dead occluding tissues

Targets. In tree risk assessment (with slight misuse of normal meaning) persons or property or other things of value which might be harmed by mechanical failure of the tree or by objects falling from it

Topping. In arboriculture, the removal of the crown of a tree, or of a major proportion of it

Torsional stress. Mechanical stress applied by a twisting force

Tree preservation order (TPO). A legal protection of the tree, and its rooting zone, enforced by the planning department of local government. Most remedial work proposed on a preserved tree requires written approval from this authority.

Veteran tree. A loosely defined term for an old specimen that is of interest biologically, culturally or aesthetically because of its age, size or condition and which has usually lived longer than the typical upper age range for the species concerned

Vigour. In tree assessment, an overall measurement of the rate of shoot production, shoot extension. Often expressed as normal, fair, low or dead (for a given species) (*cf.* Vitality)

Vitality. In tree assessment, an overall measurement of physiological and bio-chemical processes, in which high vitality equates with healthy function (*cf.* Vigour)

White-rot. A range of kinds of wood decay in which lignin, usually together with cellulose and other wood constituents, is degraded

Wind exposure. The degree to which a tree or other object is exposed to wind, both in terms of duration and velocity

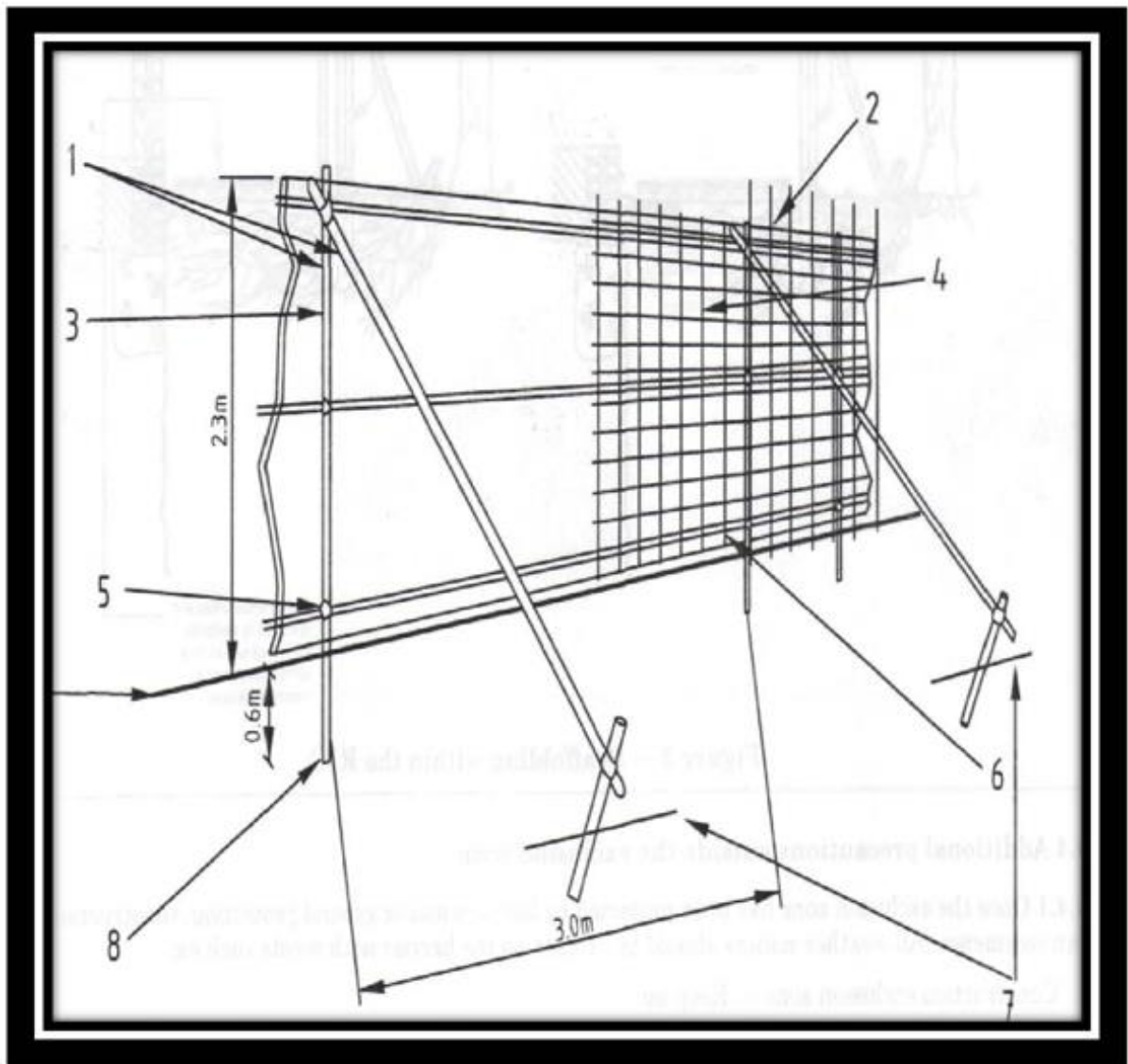
Wind pressure. The force exerted by a wind on a particular object

Windthrow. The blowing over of a tree at its roots

Woundwood. Wood with atypical anatomical features, formed in the vicinity of a wound

APPENDIX 2

DEFAULT SPECIFICATION FOR PROTECTIVE BARRIERS, AS PER BS 5837: 2012 FIGURE 2.



APPENDIX 3

BIBLIOGRAPHY

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Standards Publications

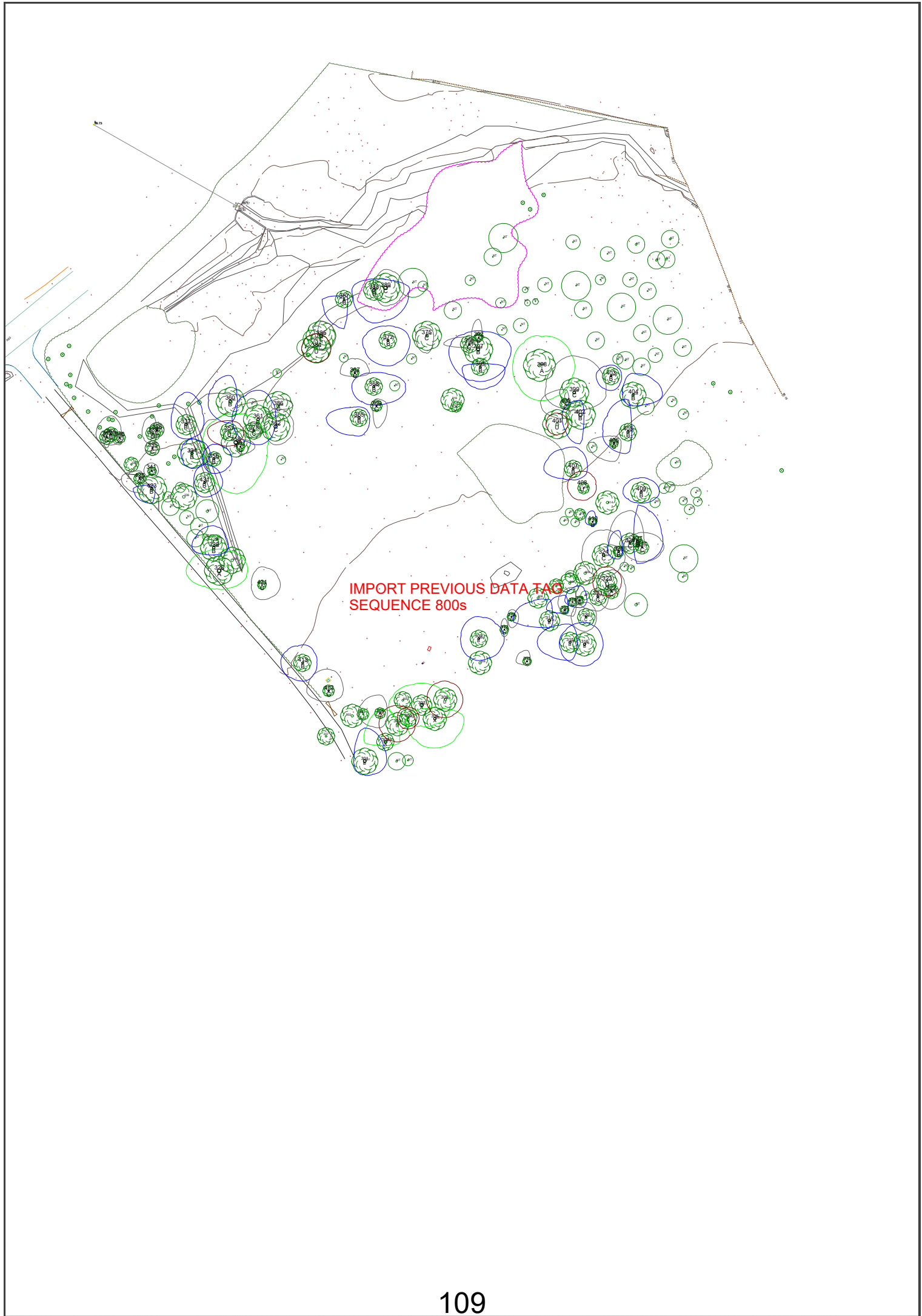
- BSI 3998: 2010, *Recommendations for tree work*.
- BSI 5837: 2012, *Trees in relation to design, demolition and construction – Recommendations*.

APPENDIX 4

TABLE 1 – BSI 5837 TREE QUALITY ASSESSMENT

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (Including subcategories where appropriate)			Identification on plan			
Trees unsuitable for retention (see Note)							
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	<ul style="list-style-type: none">Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)Trees that are dead or are showing signs of significant, immediate, and irreversible overall declineTrees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE</i> Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</p>			Trees identified by tree number and coloured circle referring to retention category.			
<table><tr><th>1 Mainly arboricultural qualities</th><th>2 Mainly landscape qualities</th><th>3 Mainly cultural values, including conservation</th></tr></table>					1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation
1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation					
Trees to be considered for retention							
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)			Colour Dark Red RGB Code 127-000-000			
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation			Colour Light Green RGB Code 000-255-000			
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories			Colour Mid Blue RGB Code 000-000-255			





Design Statement

By

Stuart King Architecture and Design Ltd

On behalf of

Freewheelin Ltd

Project

Proposed New Dwellings
Cargill, Perthshire.

Introduction

Brief

Site

Location

Context

Design & Sustainability

Concept

Layout + Scale

Materiality

Energy and renewables

Summary

Figures

Introduction

Proposed development of 4 dwellings, 2 variants at Wester Balhomie, Cargill off the A93 (56°30'26.3" N 3°23'21.2" W) on behalf of Freewheelin Ltd.

Our aim is to incorporate a relationship between the usable space and the adjacent woodland, bringing together an element of countryside living without impacting negatively on the woodland.

The site at Wester Balhomie has important characteristics and historical values that have been addressed through subtle use of materials, scale and dwelling location, as highlighted throughout this report.

Design Team:

Stuart King Architecture & Design Ltd – Craig Sutherland & Euan Miller

Lowland Planning Associates – Anne Cunningham

Geo-Info Surveyors – Jakub Cygan

Blebo Arboriculturalist - Adam Riedi

3S Limited Structural Engineer – Mark Sloan



Fig1: Woodland living

Brief

Initial client discussions indicated a desire to fulfill the potential of the site from the originally approved planning application in 2014 (14/02134/FLL) for a single bespoke dwelling in place of a ruinous Bothy. There was a clear client briefing to implement low carbon technologies, sensitive design and adaptable material.

Preserving historical landscape and woodland is key in our approach. Promoting low carbon technologies and ensuring adaptable living, to increase the buildings life cycle within a woodland environment.

Young family living is an important aspect of the conceptual approach and layout, incorporating large living areas and flexible ground floor accommodation.

Key points:

- Flexible family homes
- Relationship with the natural environment
- Woodland setting
- Sustainable materials and low carbon technologies
- Adaptable life cycle and low maintenance

Site

Location

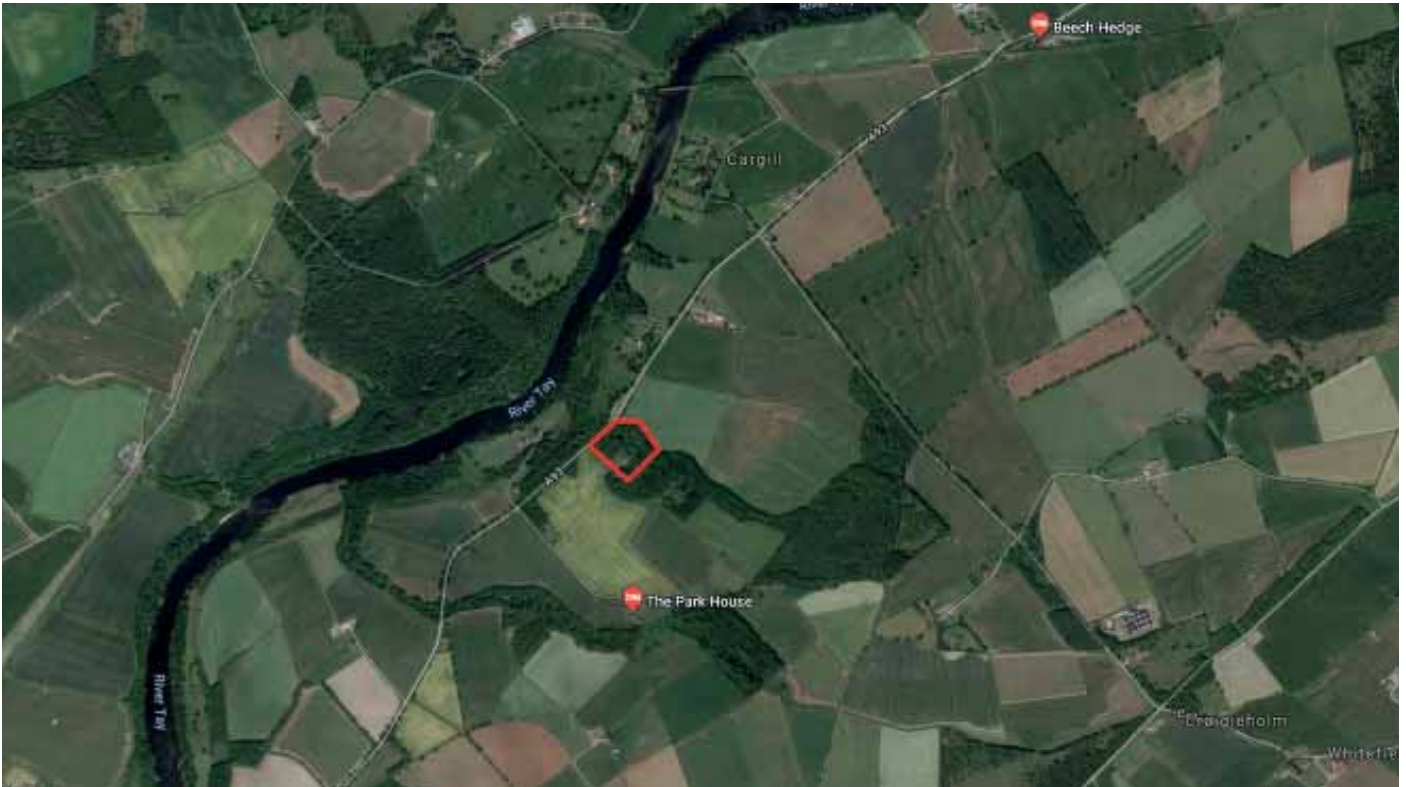


Fig2: Location



Fig3: Location



Fig4: site

The proposed development site is located East of the A93 ($56^{\circ}30'26.3''$ N $3^{\circ}23'21.2''$ W) in rural Perthshire.

As described within the supporting statement, the open area of the site consists of "tussocky grassland" surrounded by various tree species (all included with the Arboriculturalists tree report) some of which unfortunately show signs of 'Ash die-back' (*Hymenoscyphus Fraxineus*) a disease which kills up to 95% of all ash trees across the UK.

Please refer to Blebo Tree report for further information. The entrance to the site is served by a single farm track running North-West to South-East from the A93. North-East of the access road is dense woodland and boundary hedging of which we aim to retain full. South-West of the access road is out with the client's ownership and consist of cropped farmland.

Full power and water supply to the site, activating the approved planning application form 2014.

DESIGN & SUSTAINABILITY

Concept



From initial conception the proposals for this development have always been driven by modern family open plan living, high quality low carbon materials, traditional forms and grand features.

Our aim is for the buildings to respond to their immediate context conserving the biodiversity of the site and allowing the end user to live in a home surrounded by nature and woodland. Each dwelling and house type are positioned as such to take advantage of the existing woodland, reduce potential density of living and reduce infrastructure and disturbance to the site.

The use of natural stone, in response to the previously sited Bothy will be incorporated as a heightened basecourse, separated by an aluminium or stone sill and recessed smooth white render and/or natural cedar cladding. Natural slate roof finish and large overhangs throughout.

Windows to be black slim line aluminium low-e double glazed windows throughout.



Fig6: Internal view

Materiality



Fig7: House type 1

Each variant is intended to incorporate materials that respond to the natural environment and offer a longer life cycle with low maintenance and sustainable processes.

Natural timber cladding 'Russwood- SILA A/D Skimmed boards and factory coated with SiOO:X'

Natural sandstone stone applied to basecourse detail and at varying facades, such as the sunroom and entrance.



Fig8: House type 2

Layout + Scale

House Type 1



Proposed Front (South East) Elevation



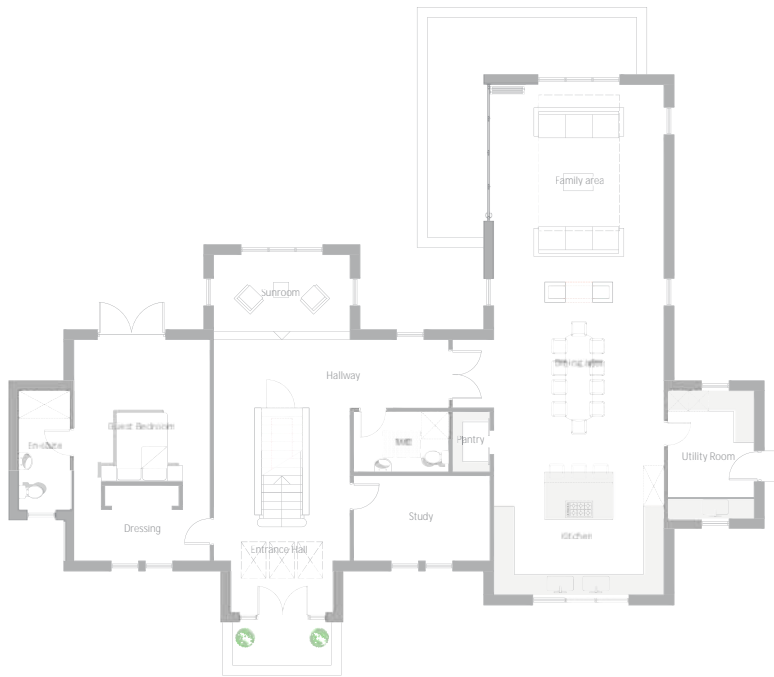
Proposed Rear (North West) Elevation



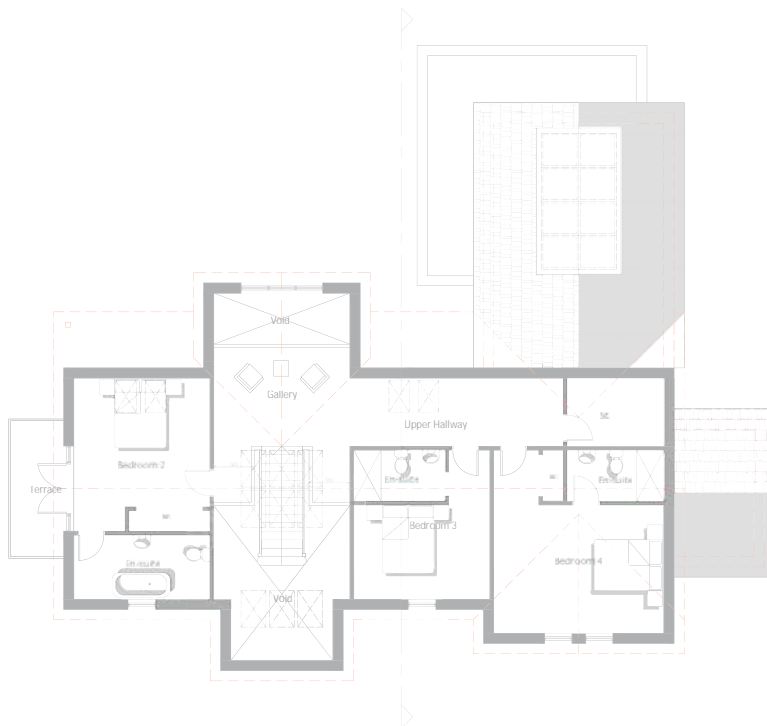
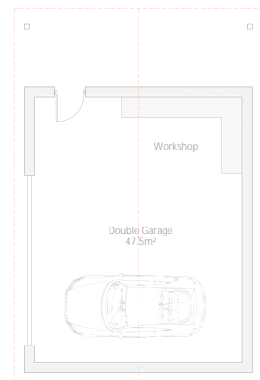
Proposed Side Elevation



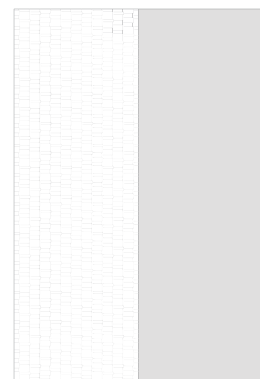
Proposed Side Elevation



Proposed Ground Floor Layout Plan



Proposed First Floor Layout Plan



House Type 2



Proposed Front (South East) Elevation



Proposed Rear (North West) Elevation



Proposed Side (South West) Elevation



Proposed Side (North East) Elevation



Proposed Ground Floor Layout Plan



Proposed Ground Floor Layout Plan

Energy + Renewables

The client intends to apply various renewable approaches within the development site and dwellings.

Durisol wood-cement permanent formwork walling units BBA Certificate No. 10/4784. 500x250x365mm with a thermal conductivity of 0.15 W/m²K.

Heating through Air Source Heat pump for the dwellings removes a requirement for gas on site and allows for a full electric development, reducing carbon emissions across the development. Although the dwellings will suffer from some over-shading from immediate north-west and north-east woodland, the southern roofed areas may offer scope for solar pv.

These renewables will allow the end user to produce and recover energy throughout its life cycle. Construction will be aimed towards achieving low air tightness levels and healthy living conditions by installing a Mechanical Ventilation Heat Recovery system. The MVHR units will improve the air condition within the dwellings.

For information on the ASHP please see the link to the energy saving trust below.

For information on the Durisol blocks please see the link to the energy saving trust below.

ASHP: <https://www.energysavingtrust.org.uk/renewable-energy/heat/air-source-heat-pumps>

Durisol: <https://www.durisoluk.com/why-durisol/>

MVHR: <https://www.paulheatrecovery.co.uk/>

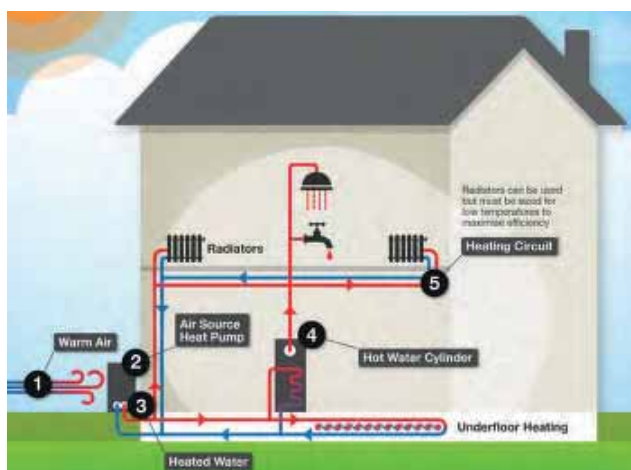


Fig9: Air Source Heat Pump



Fig10: Durisol Block

Summary

A site of 4 dwellings, 2 house types, varying between 250-300mm² with 40m² garage and workshop space. Minimal circulation space and open plan modern family living.

Countryside living in a woodland environment set within rural Perthshire, promoting fully electric services and recovery technology, low carbon materials and traditional forms.

The development is empathetic to current site conditions, offers a subtle response and aims to build a relationship with the existing woodland. These new homes will appeal to young families looking for countryside micro estate living with open plan spaces and modern low carbon technologies.

Tree Retention and Protection

The conceptual process of this development has proposed considerable provisions to protect the existing trees and plan for new planting to replace those felled. Woodland management plan will be implemented to ensure all year coverage.

Trees which are in good condition as per the Arboriculturalists survey will be protected throughout the construction and retained as existing site features. Trees are sensitive living organisms and we intend on ensuring their protection. New transplant planting of hedge rows and individual nursery stock trees will take place throughout the development as boundary treatments.

Development CGI/video Link: <https://youtu.be/iddu8H502oU>



Figures

Fig1: Woodland living

Fig2: Site Location

Fig3: Location

Fig4: Site access

Fig5: Site

Fig6: Internal view

Fig7: House Type 1

Fig8: House Type 2

Fig9: Air Source Heat Pump Diagram

Fig10: Durisol Block

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Stuart King Architecture &
Design Ltd

LRB-2020-28 – 20/01197/FLL – Erection of 4 dwellinghouses, land 350 metres south east of Broadgreen, Cargill

PLANNING DECISION NOTICE

REPORT OF HANDLING

REFERENCE DOCUMENTS *(part included in applicant's submission, see pages 25-30, 41-108 and 111-126)*



Mr Jim Tait
c/o Craig Sutherland
Suite 2 Abtel Building
Pitreavie Drive
Pitreavie Business Park
Dunfermline
Fife
KY11 8US

Pullar House
35 Kinnoull Street
PERTH
PH1 5GD

Date of Notice: **16th November 2020**

TOWN AND COUNTRY PLANNING (SCOTLAND) ACT

Application Reference: **20/01197/FLL**

I am directed by the Planning Authority under the Town and Country Planning (Scotland) Acts currently in force, to refuse your application registered on 9th September 2020 for Planning Permission for **Erection of 4 dwellinghouses Land 350 Metres South East Of Broadgreen Cargill**

David Littlejohn
Head of Planning and Development

Reasons for Refusal

- 1 The proposal is contrary to Policy 19 Housing in the Countryside of the Perth and Kinross Local Development Plan 2 (2019) and the associated Housing in the Countryside Supplementary Guidance (March 2020) as it does not meet any of the criteria within the categories: 1) Building Groups, 2) Infill sites, 3) New houses in the open countryside, 4) Renovation or replacement of houses, 5) Conversion or replacement of redundant non-domestic buildings and 6) Development on rural brownfield land. In particular the site although being formally developed does not meet the definition of rural brownfield land outlined in Category 6.
- 2 The proposal is contrary to Policy 41 Biodiversity as no ecological survey of the proposed development area or assessment of the likely effects from this development on habitats and species was submitted.
- 3 The proposal is contrary to Policy 40 Forestry and Trees as information to make a thorough assessment of the potential impact of this development on the existing trees and woodland area, has not been provided.

Justification

The proposal is not in accordance with the Development Plan and there are no material reasons which justify departing from the Development Plan.

Notes

The plans and documents relating to this decision are listed below and are displayed on Perth and Kinross Council's website at www.pkc.gov.uk *Online Planning Applications" page

Plan Reference

01	20
02	21
03	22
04	23
05	24
06	25
07	26
08	27
09	28
10	29
17	30
18	31
19	

REPORT OF HANDLING

DELEGATED REPORT

Ref No	20/01197/FLL	
Ward No	P2- Strathmore	
Due Determination Date	8th November 2020	
Report Drafted Date	13th November 2020	
Report Issued by	JF	Date 13.11.2020

PROPOSAL: Erection of 4 dwellinghouses

LOCATION: Land 350 Metres South East Of Broadgreen Cargill

SUMMARY:

This report recommends **refusal** of the application as the development is considered to be contrary to the relevant provisions of the Development Plan and there are no material considerations apparent which justify setting aside the Development Plan.

DATE OF SITE VISIT: No site visit due to Covid-19 restrictions however site was visited when previous application 19/02127/FLL was under consideration.

SITE PHOTOGRAPHS



BACKGROUND AND DESCRIPTION OF PROPOSAL

The application site is located within a rural area contained by woodland with access via a track onto the A93. This application is for the erection of four dwellings on a site which was previously granted permission for the erection of one dwelling house on the site of a non-domestic traditional outbuilding.

The previous permission on the site has been implemented through the formation of the access and the building which formerly occupied the site has been removed. The proposal is to build four large detached dwellings within the site arranged along one central access road.

SITE HISTORY

03/00179/FUL Single storey extension to existing cottage and installation of velux windows at 12 March 2003 Application Approved

14/00661/IPL Erection of dwellinghouse (in principle) 12 June 2014 Application Approved

14/02134/FLL Erection of a dwellinghouse 3 February 2015 Application Approved

19/02127/FLL Erection of 4 dwellinghouses 18 March 2020 Application Withdrawn

PRE-APPLICATION CONSULTATION

Pre application Reference: N/A

NATIONAL POLICY AND GUIDANCE

The Scottish Government expresses its planning policies through The National Planning Framework, the Scottish Planning Policy (SPP), Planning Advice Notes (PAN), Creating Places, Designing Streets, National Roads Development Guide and a series of Circulars.

DEVELOPMENT PLAN

The Development Plan for the area comprises the TAYplan Strategic Development Plan 2016-2036 and the Perth and Kinross Local Development Plan 2019.

TAYplan Strategic Development Plan 2016 – 2036 - Approved October 2017

Whilst there are no specific policies or strategies directly relevant to this proposal the overall vision of the TAYplan should be noted. The vision states *“By 2036 the TAYplan area will be sustainable, more attractive, competitive and vibrant without creating an unacceptable burden on our planet. The quality of life will make it a place of first choice where more people choose to live, work, study and visit, and where businesses choose to invest and create jobs.”*

Perth and Kinross Local Development Plan 2 (2019) – Adopted November 2019

The Local Development Plan 2 is the most recent statement of Council policy and is augmented by Supplementary Guidance.

The principal policies are, in summary:

Policy 1A: Placemaking

Policy 1B: Placemaking

Policy 5: Infrastructure Contributions

Policy 19: Housing in the Countryside

Policy 32: Embedding Low & Zero Carbon Generating Technologies in New Development

Policy 40A: Forestry, Woodland and Trees: Forest and Woodland Strategy

Policy 40B: Forestry, Woodland and Trees: Trees, Woodland and Development

Policy 41: Biodiversity

Policy 53A: Water Environment and Drainage: Water Environment

Policy 53B: Water Environment and Drainage: Foul Drainage

Policy 53C: Water Environment and Drainage: Surface Water Drainage

Policy 58A: Contaminated and Unstable Land: Contaminated Land

Policy 60B: Transport Standards and Accessibility Requirements: New Development Proposals

OTHER POLICIES

Housing in the Countryside Supplementary Guidance 2020

Placemaking Guidance 2020

CONSULTATION RESPONSES

Perth And Kinross Heritage Trust	No objection
Transport Planning	No objection
Environmental Health (Private Water)	No objection, condition and informative required
Development Negotiations Officer	Contributions required
Structures And Flooding	Additional information required
Environmental Health (Noise Odour)	No objection conditions required for noise
Biodiversity/Tree Officer	No ecological survey submitted outstanding queries with Tree Report
Strategy and Policy Team	Proposal does not comply with policy

REPRESENTATIONS

No letters received

ADDITIONAL STATEMENTS

Screening Opinion	Not Required
Environmental Impact Assessment (EIA): Environmental Report	Not applicable
Appropriate Assessment	Not Required
Design Statement or Design and Access Statement	Submitted
Report on Impact or Potential Impact eg Flood Risk Assessment	Submitted

APPRAISAL

Sections 25 and 37 (2) of the Town and Country Planning (Scotland) Act 1997 require that planning decisions be made in accordance with the development plan unless material considerations indicate otherwise. The Development Plan for the area comprises the approved TAYplan 2016 and the adopted Perth and Kinross Local Development Plan 2 (2019).

The determining issues in this case are whether; the proposal complies with development plan policy; or if there are any other material considerations which justify a departure from policy.

Policy Appraisal

Policy 19 - Housing in the Countryside and the Supplementary Guidance 2020, notes that opportunities exist for housing in rural areas to support the viability of communities, meet development needs in appropriate locations while safeguarding the character of the countryside as well as ensuring that a high standard of siting and design is achieved. The development of single houses or groups of houses which fall within the six identified categories will be supported.

The Council will support proposals for the erection, or creation through conversion, of single houses and groups of houses in the countryside which fall into at least one of the following categories:

- 1) Building Groups
- 2) Infill site
- 3) New houses in the countryside on defined categories of sites as set out in section 3 of the Supplementary Guidance
- 4) Renovation or replacement of houses
- 5) Conversion or replacement of redundant non-domestic buildings
- 6) Development on rural brownfield land

The proposal is for the erection for 4 houses on a countryside site. Planning permission was granted previously for one house under category 5 of the Housing in the Countryside Policy as it replaced an existing building on the site. To clarify a four house development would not have met the criteria under replacement of the existing building due to the small footprint.

This application is considered on the basis that the implementation of the previous permission for erection of a single dwelling is a material consideration as the site has been cleared of the former building but the house has not been built.

The proposal is not within or an extension to an existing building group (Category 1), nor is it an infill site under Category 2. The supporting statement states that the overall scheme will include the management of the surrounding woodland, but it is not considered sufficient justification under 'Houses for Sustainable Living', besides, this category (3.5) only allows for single houses. No evidence has been submitted that the proposal complies with any other part of Category 3 - New Houses in the Open Countryside either. From reviewing the site photographs there would not appear to be any buildings on the site - other than a very small wooden shed / hut - and so the current proposal would not comply with category 4 or 5.

That only leaves category 6 - Development on Rural Brownfield Land. This category allows for the redevelopment of derelict land which is defined as: land which was at one time occupied by buildings or structures but these have now been removed, or land directly linked to former buildings or structures, which has been so damaged by a former use that it cannot be left to naturalise or be reused for another purpose without first being improved. The site photographs appear to show that the site is an open grassy area and the supporting statement confirms it is 'a bare field of tussocky grass'. Whilst an old building originally stood on the site (and was granted permission for replacement) this has now been removed and no evidence has been submitted that the site would meet the definition of derelict land under category 6.

The agent has submitted additional information in the form of a Contaminated Land letter and historical maps. These have been reviewed by the Policy Team and the Contaminated Land Officer. The Housing in the Countryside Supplementary Guidance under Category 6 clearly states that even where some contamination is present remediation may not be necessary if there is no significant risk to human health or the wider environment. Whilst it is acknowledged that the statement highlights the possibility of a number of contaminants on the site, the Policy Officer is of the view that we do not have evidence that any contamination which is known to be on the site is so significant that it is currently posing a significant risk to human health or the environment, and that the only means by which it is viable to carry out the required remediation is to build four houses. The agent has indicated that they would be happy to provide additional investigation of the contamination on the site however I would not be comfortable putting the applicant to this expense if the contamination is not more than what we would expect to see on any former agricultural/rural development site. I have however consulted with the Contaminated Land Officer as they can provide a review of the report and advise whether it would be worth further investigations being undertaken. The Officer has reviewed the information and historical mapping. They note that while there may be some contamination present resulting from the previous use of the site there is nothing to indicate that the site in its current condition would be likely to present any risk to

human health or to the wider environment. It is therefore considered that the site would not meet the definition as outlined in the policy and guidance.

It is therefore considered that this site is not able to satisfy the requirements of Category 6 of the policy. However the site still has an extant permission for one dwelling and the council would be supportive of a change of house type on the site.

Design and Layout

The proposal is for four substantial detached dwellings comprising of two-house types. They will be arranged around a central access road with turning head.

The dwellings are 1 ½ storey with one house type having an integral garage the other a detached garage. The materials and finishes are to a high standard with an emphasis on renewables promoting fully electric services, recovery technology and low carbon materials.

The access road proposed is more urban than rural in form finished in tarmac which leads to an overly engineered turning head. If the principle of development had been accepted the road could have been revised to reflect the rural character with the dwelling arranged around central courtyard for example reflecting a rural building grouping.

The general form of the dwelling and finish materials is acceptable however as stated the policy does not support this scale of development on the site.

Residential Amenity

The dwellings are adequately spaced and arranged to retain privacy and amenity for each dwelling.

Environmental Health note that the applicant proposes to install air source heat pumps for each property. They have no objection in principle provided conditions are included if permission is granted to protect the residential amenity of the dwelling houses from noise.

Roads and Access

Transport Planning have no objection to the application on road safety, parking etc but as above there are placemaking concerns regarding the form and extent of the access road finish.

Drainage and Flooding

The Flood Team note that the surface water drainage should be designed to the 1:200 year rainfall event, plus a 30% allowance for climate change. They note that it's not clear what event the storage is designed to take. The discharge to the receiving watercourse must also not exceed the greenfield runoff rate. This could be covered by condition had the principle of development been accepted.

The development is in a rural area with private water supplies believed to serve properties in the vicinity. To ensure the new development has an adequate and consistently wholesome supply of water and to maintain water quality and supply in the interests of residential amenity and ensure the private water supply or septic drainage systems of neighbours of the development remain accessible for future maintenance condition and informatives would be required if permission is granted.

Conservation Considerations

In respect to archaeology and the planning process, as outlined by Scottish Planning Policy, the proposed development does not raise any significant issues. No further archaeological mitigation is required in this instance.

Trees

The Enforcement Tree Officer has reviewed the proposed site layout, tree report, the constraints plan, the tree survey plans (2), and supporting statement. The planning consultant has argued that the woodland benefits of the scheme should be given strong support in terms of a justification for the development (as noted in the policy section above this would not support a four dwelling proposal).

The Officer notes that the tree report whilst generally informative lacks specific details on how the development will be integrated without impacting the trees. The report Introduction and Methodology does not include an assessment of the suitability of the development and potential impact on the trees at the site. The application is therefore deficient on this level of detail, and so cannot be properly assessed. No CEZ plan has been provided (Construction Exclusion Zone) and at no point does the applicant actually consider how the future occupiers will co-exist and live with the mature trees at this site, perceived risk of tree failure, leaf litter, use of garden amenity spaces, etc. Given the number of beech at the site, no comments have been offered to house orientation and light levels, and how the trees at the site will impact on available light to each of the dwellings.

A woodland management plan is muted (not submitted) and could have been included as part of the submission. A woodland survey and woodland management plan would have recognised the broader characteristics (topography/site drainage/canopy cover/biodiversity/ground flora. etc) and virtues of this site and set objectives for its net improvement. This has been relayed to the agent but again not pursued as a justification for tree management would not be enough to outweigh the Housing in the Countryside Policy.

In terms of the tree removal proposed there are discrepancies - the layout plan advises of five trees to be removed, yet the tree report states 14 x trees are to be felled. The fact is that the five trees listed on the site layout plan schedule reflect only those identified to be removed to accommodate the proposed development footprint (which the Tree Officer considers might have been underestimated), and not by virtue of their condition, and includes three oaks, two of which are Cat B. The site layout plan (and tree survey + tree constraints plans) do not illustrate the trees which the tree report has identified for removal and gives the impression that more trees are being retained. At least nineteen trees are proposed for removal, not 5 or 14. In addition, the tree report omits those that have not been tagged (a point which the

writer acknowledges), and it is clear from the site layout plan that there are numerous trees identified as (NT ..native tree?) that have not been accounted for in the site assessment. No clear plan has been provided showing precisely which trees are to be removed overall and which are to be retained (overall).

The Officer considers that the information required to make a thorough assessment of the potential impact of this development on the existing trees and woodland area, has not been provided. It is not considered that the development proposal will have a positive benefit on the woodland at this site to justify approval contrary to Policy 19 Housing in the Countryside.

Biodiversity

No ecological survey of the proposed development area or assessment of the likely effects from this development on habitats and species was submitted alongside this application therefore there is insufficient information to assess the application against Policy 41: Biodiversity. The Biodiversity Officer considers that an ecological survey would be required outlining the importance of the habitat, species present, impact of development and proposed mitigation measures. At this stage as the application is progressing refusal on policy grounds, I have not requested the submission of a survey.

Developer Contributions

It is noted that an existing planning consent (14/02134/FLL) for the erection of 1no dwellinghouse has been implemented on-site. The Developer Contributions requirements for that proposal have been paid, therefore the current proposal for 4no dwellinghouses will be assessed for the net increase of 3no dwellinghouses.

Primary Education

The Council Developer Contributions Supplementary Guidance requires a financial contribution towards increased primary school capacity in areas where a primary school capacity constraint has been identified. A capacity constraint is defined as where a primary school is operating at over 80% and is likely to be operating following completion of the proposed development, extant planning permissions and Local Development Plan allocations, at or above 100% of total capacity.

This proposal is within the catchment of Guildtown Primary School. Education & Children's Services have no capacity concerns in this catchment area at this time.

Transport Infrastructure

With reference to the above planning application the Council Transport Infrastructure Developer Contributions Supplementary Guidance requires a financial contribution towards the cost of delivering the transport infrastructure improvements which are required for the release of all development sites in and around Perth.

The site is located within the Transport Infrastructure contributions zone (Appendix 3 of the Supplementary Guidance). The reduced rate will apply (£2,742 per unit) to 3no. units. Total: £8,226

Economic Impact

The economic impact of the proposal is likely to be minimal and limited to the construction phase of the development. There would be some associated spending in the local area with the occupation of the dwelling however this into considered to be significant.

Conclusion

In conclusion, the application must be determined in accordance with the adopted Development Plan unless material considerations indicate otherwise. In this respect, the proposal is not considered to comply with the approved TAYplan 2016 and the adopted Local Development Plan 2 (2019). I have taken account of material considerations and find none that would justify overriding the adopted Development Plan. On that basis the application is recommended for refusal.

APPLICATION PROCESSING TIME

The recommendation for this application has not been made within the statutory determination period due to additional comments being sought from the Contaminated Land Officer.

LEGAL AGREEMENTS

None required.

DIRECTION BY SCOTTISH MINISTERS

None applicable to this proposal.

RECOMMENDATION

Refuse the application

Conditions and Reasons for Recommendation

- 1 The proposal is contrary to Policy 19 Housing in the Countryside of the Perth and Kinross Local Development Plan 2 (2019) and the associated Housing in the Countryside Supplementary Guidance (March 2020) as it does not meet any of the criteria within the categories: 1) Building Groups, 2) Infill sites, 3) New houses in the open countryside, 4) Renovation or replacement of houses, 5) Conversion or replacement of redundant non-domestic buildings and 6) Development on rural brownfield land. In particular the site although being formally developed does not meet the definition of rural brownfield land outlined in Category 6.

- 2 The proposal is contrary to Policy 41 Biodiversity as no ecological survey of the proposed development area or assessment of the likely effects from this development on habitats and species was submitted.
- 3 The proposal is contrary to Policy 40 Forestry and Trees as information to make a thorough assessment of the potential impact of this development on the existing trees and woodland area, has not been provided.

Justification

The proposal is not in accordance with the Development Plan and there are no material reasons which justify departing from the Development Plan.

Informatives

N/A

Procedural Notes

Not Applicable.

PLANS AND DOCUMENTS RELATING TO THIS DECISION

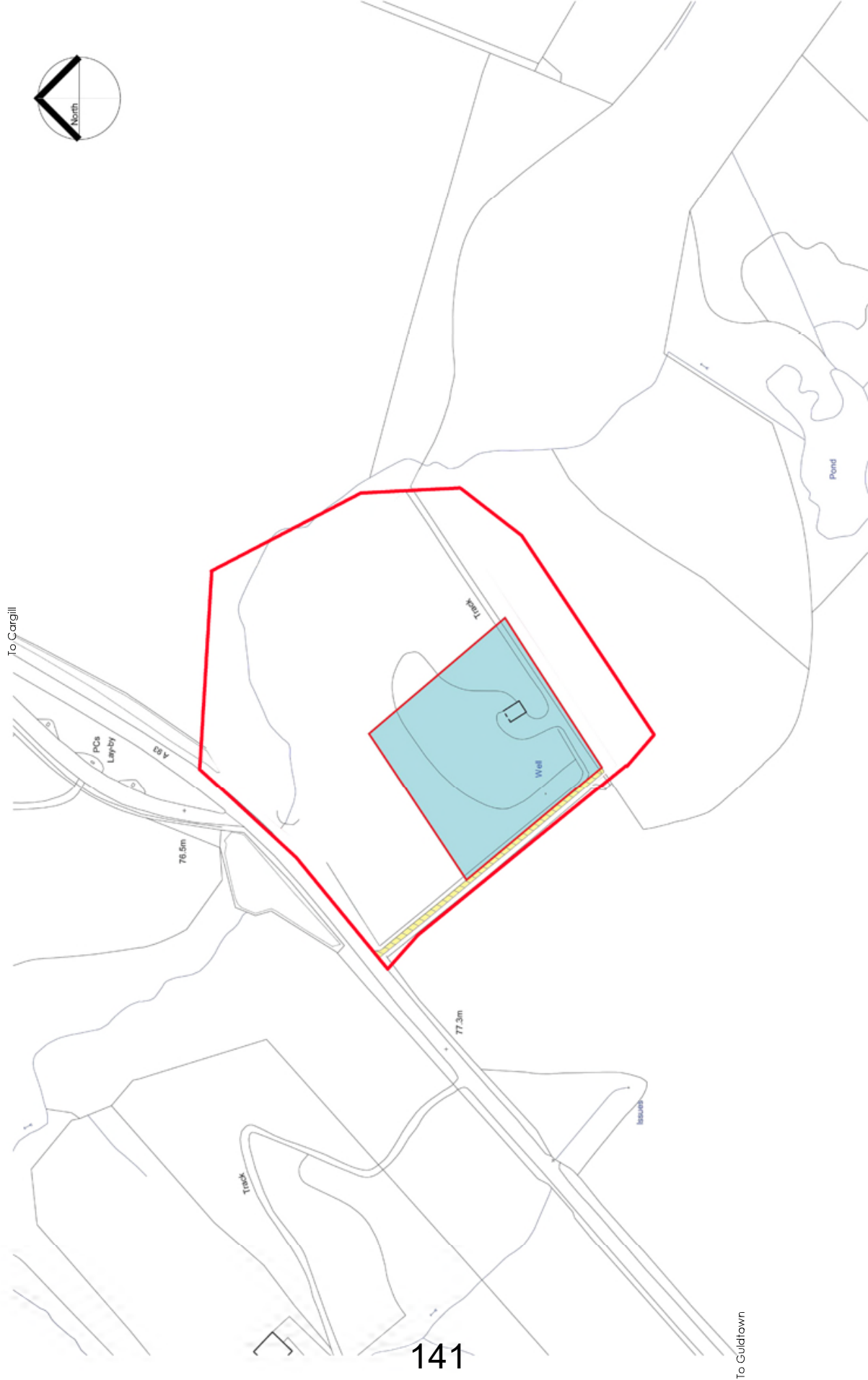
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Notes / Revisions:

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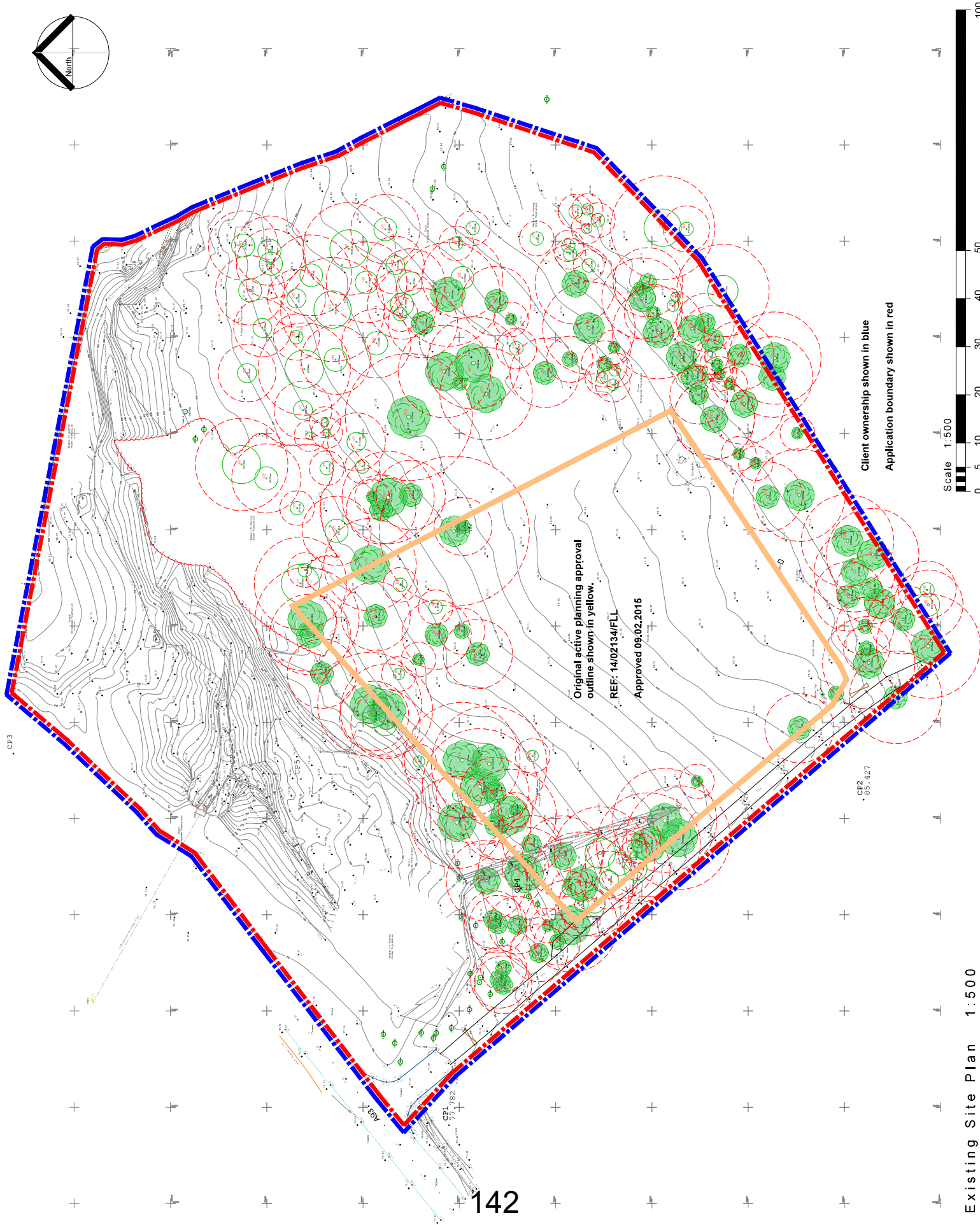
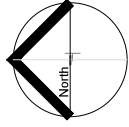
Existing Site Location Plan 1:1250

Development Site:		Cargill Development	
Client:		Freewheelin Ltd	
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**Original active planning approval
outline shown in yellow.**

REF: 14/02134/FLL

Approved 09.02.2015

Client ownership shown in blue


Application boundary shown in red

Scale 1:500

Existing Site Plan 1:500

1:500

1

Development Site Cargill Development Client Freewheelin Ltd		BY AMENDMENTS		 Stuart King Architecture & Design • 20 Cornhill Square, South Hill 2 2AR • Tel: 01203 251 622 • info@stuartking.co.uk
		REV	DATE	
Scale	1:500	Date	DEC 2019	Drawn By CS
Drawing Title	A2 Proposed housing development of 4 dwellings at Cargill, Perthshire - 2 in No. Variations			
Title Sheet Existing Site Plan				Rev
Drawn No	18-01664 (0) 01			

is / Revisions:





Topographical survey by Geo-Info

Tree Felling summary:

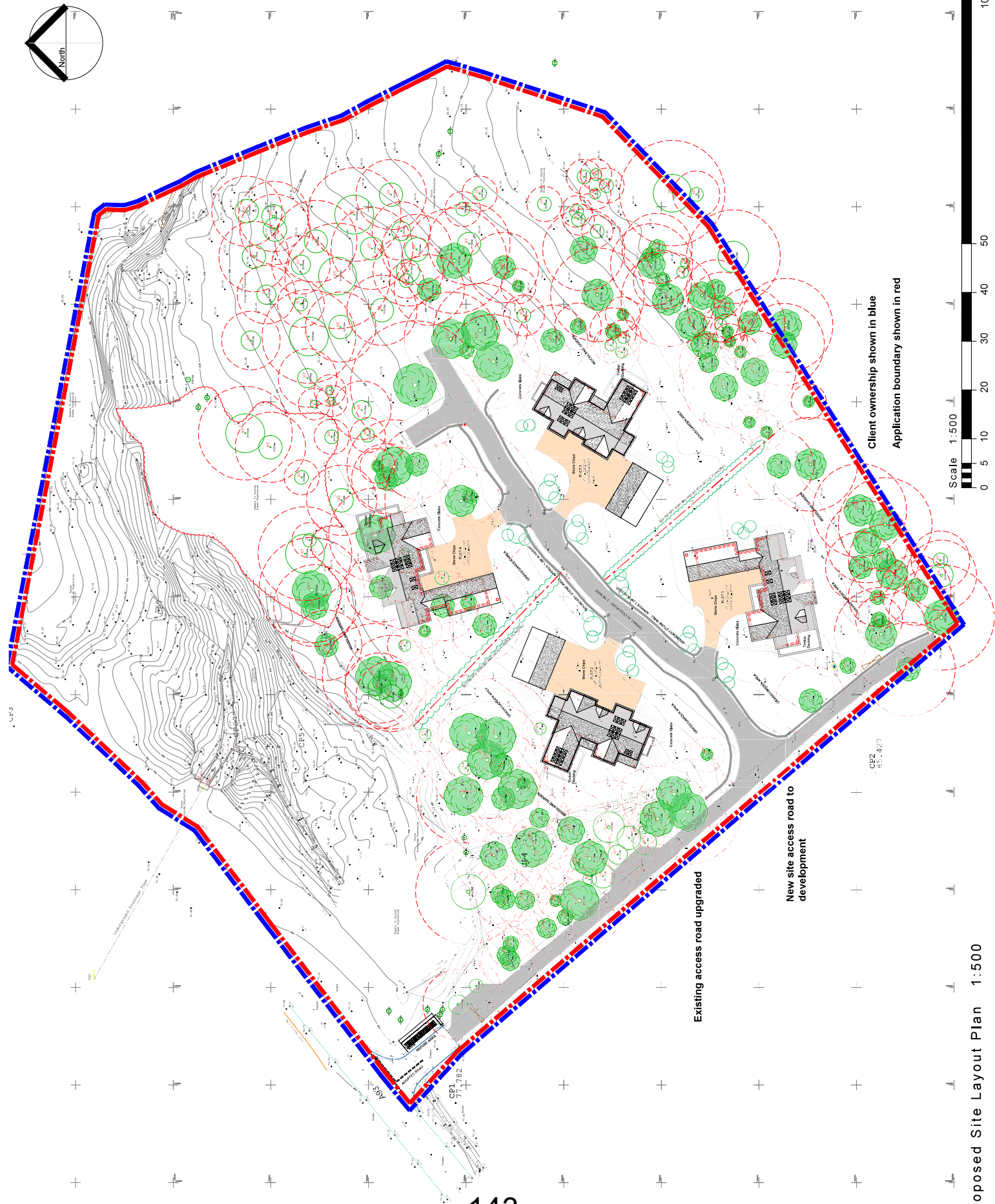
367
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Please refer to tree survey data
by Blebo Tree Surveys

Material Key:


- Material Key:**
-  Stone Chipped Driveway
 -  Stone Wall
 -  Concrete Slabs
 -  Tarmac Access Road

143



Proposed Site Layout Plan 1:500

100

Development Site: Cargill Development	Client: Freewheelin Ltd	REV	DATE	BY	AMENDMENTS
 Stuart King Architecture & Design					
• 6 Clarendon Gardens, Dublin D11 2JH • Tel: 01832 351522 • info@stuartking.ie					
SRAO Reference 18-01664	Drawn By CS	Scale 1:500	Date DEC 2019	Size A2	Proposed housing development of 4 dwellings at 100m ² plot area ± 2 in No. Variations
Drawing Title: Proposed Site Layout Plan					
Title Sheet					
DWG No 18-01664 (0) 02					Rev Rev

Notes / Revisions:

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A

A

Proposed Site Section A-A 1:500

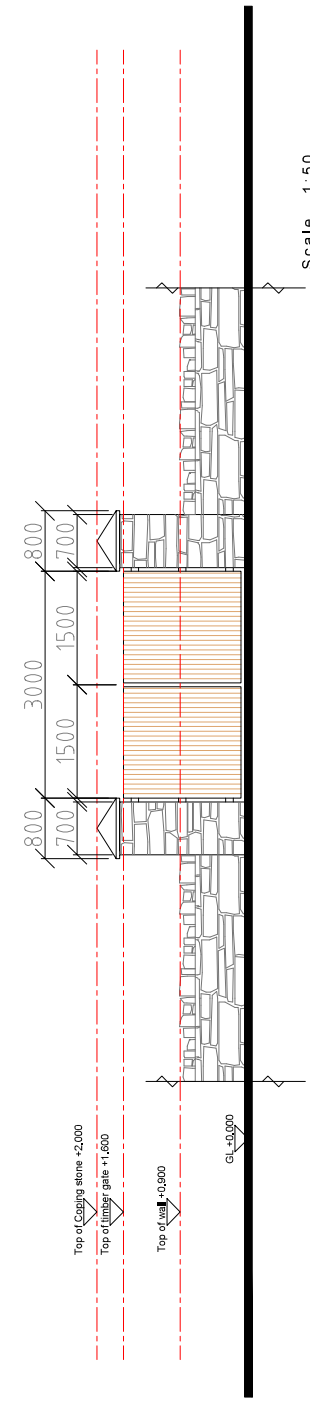
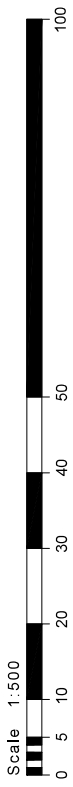
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B

B

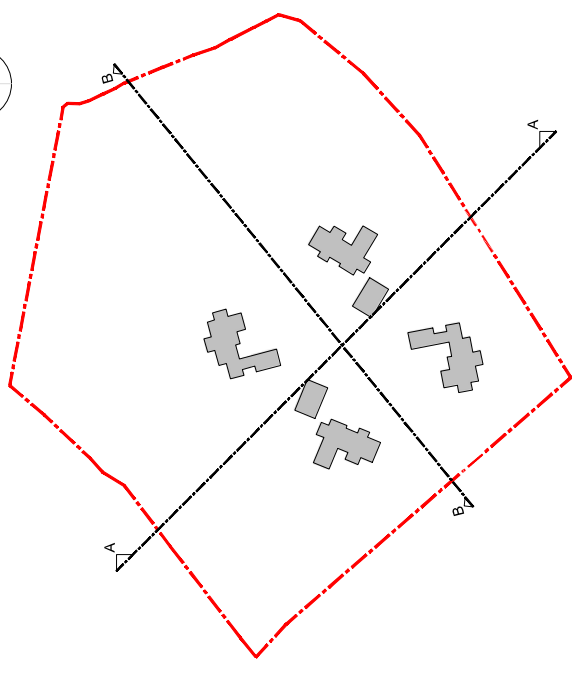
Proposed Site Section A-A 1:500


Scale 1:500



Proposed Gate Elevation 1:50

Scale 1:50



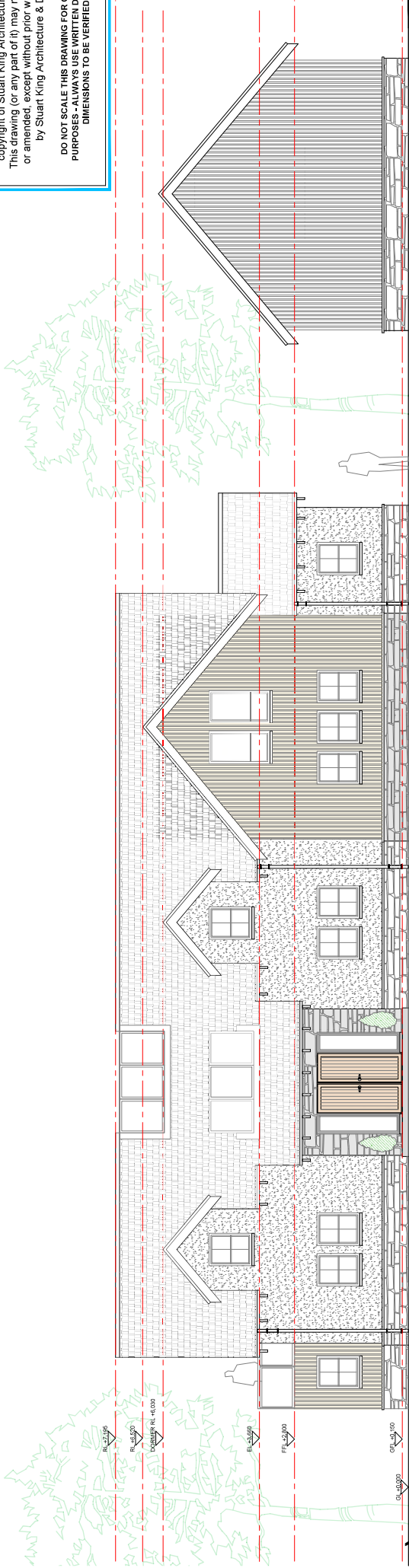
Development Site		Cargill Development	
Client		Freewheelin Ltd	
REV	DATE	BY	AMENDMENTS
<div><div></div><div>Stuart King Architecture & Design</div></div> <div><div>• 42 Cherry Street, Perth, G1 3EA • Tel: 01835 371025 • info@stuartking.co.uk</div></div>			
SQAID Reference		Drawn By	CS
18-01664		Scale	A2
		Date	DEC 2019
Drawing Title		Proposed housing development of 4 dwellings at Cargill, Perthshire - 2 in No Variations	
Title Sheet		Proposed Site Sections	
DWG No		18-01664 (0) 3	
		Rev	

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Proposed Front Elevation
Plot 2 (South East) - Plot 3 (North West)

Development Site:
Cargill Development

Client:
Freewheelin Ltd

REV	DATE	BY	AMENDMENTS

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SKAD Reference:
SKA 18-01664

Drawn By:

Scale:
1/100

Date:
October 2019

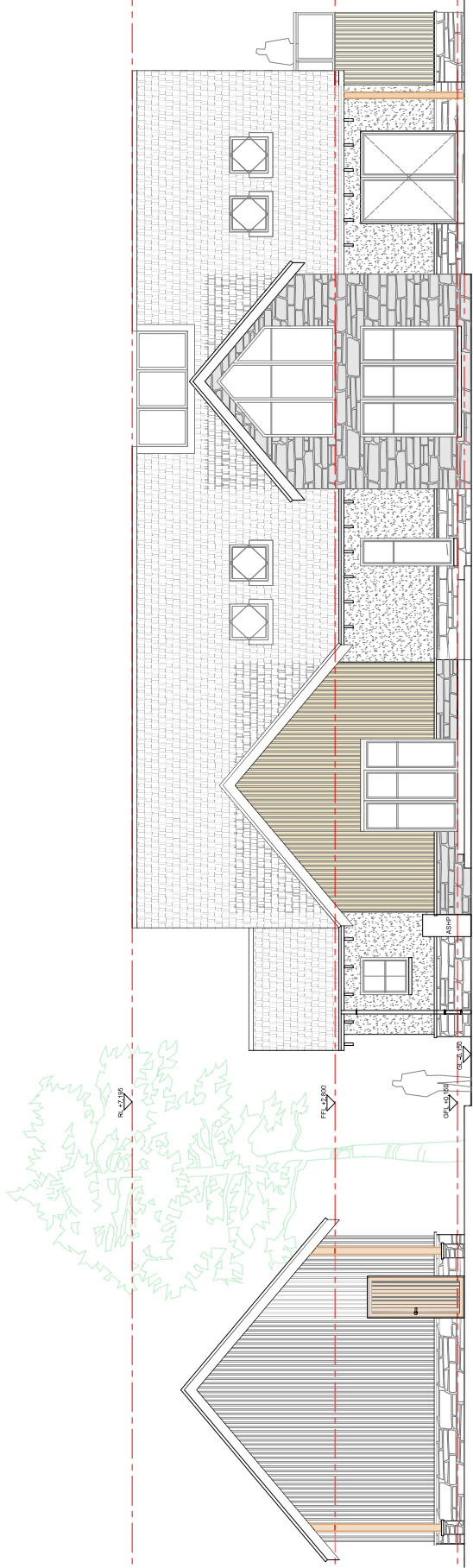
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Drawing Title:
Proposed housing development of
4 dwellings at Cargill, Perthshire -
2 In No. Variations

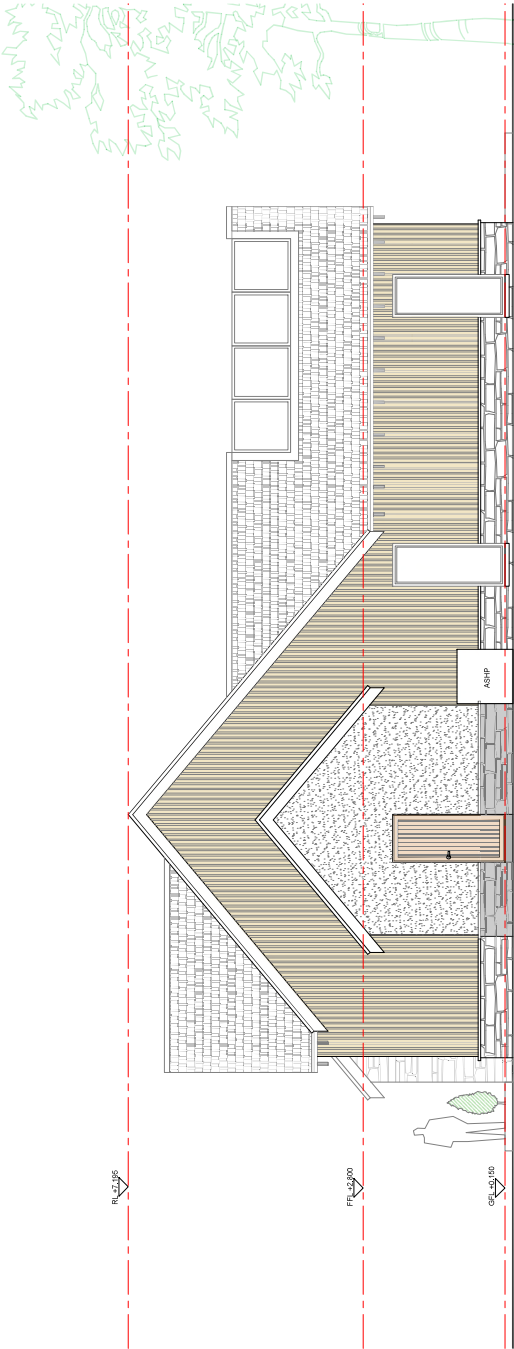
Title Sheet:
Proposed Elevations - HT1

DWG No:
18-01664 (2-) 03

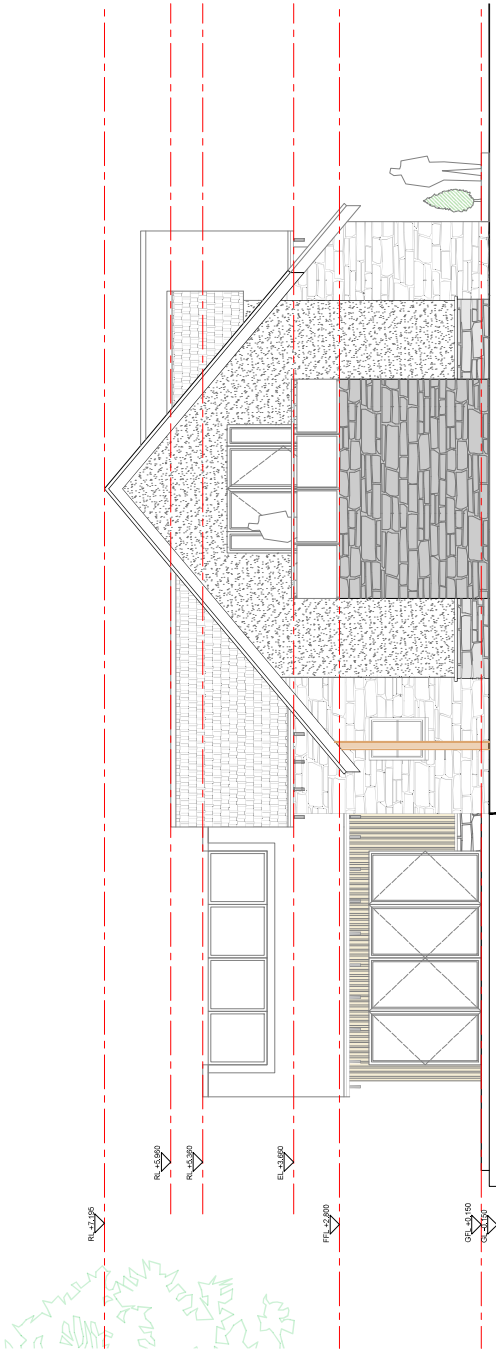
Rev:



Proposed Rear Elevation
Plot 2 (North West) - Plot 3 (South East)



Proposed Side Elevation
Plot 2 (North) - Plot 3 (South)




Proposed Side Elevation
Plot 2 (South) - Plot 3 (North)

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Development Site Cargill Development			
Client Freewheelin Ltd			
REV	DATE	BY	AMENDMENTS
<div><div><div>Stuart King Architecture & Design</div></div><div><small>• 14 Cromarty Campus, Broomfield, Perth KT11 2WS • Tel: 01342 257 022 • info@stuartkingarchitecture.com</small></div></div>			
SKAD Reference: SKA 18-01664		Drawn By:	
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DWG No: 18-01664 (2-) 04		Rev:	

Notes / Revisions:

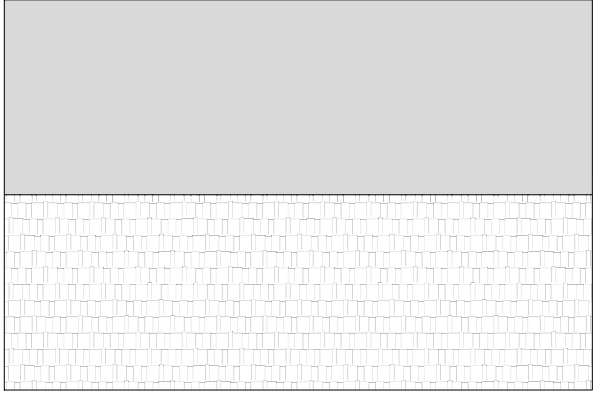
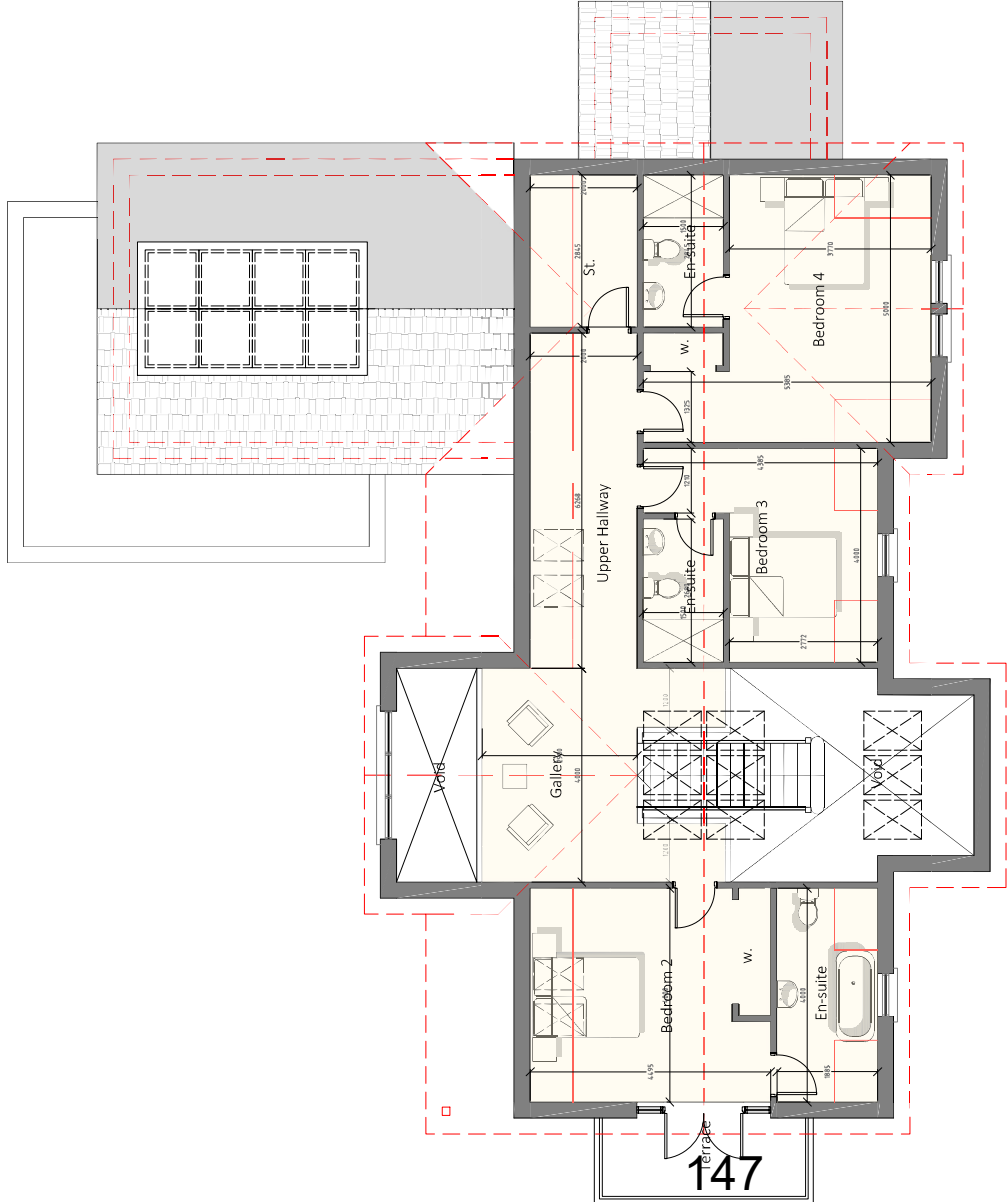
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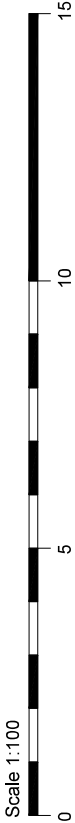
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HT 1

Gross External Area = 102.8m²



Proposed First Floor Layout Plan



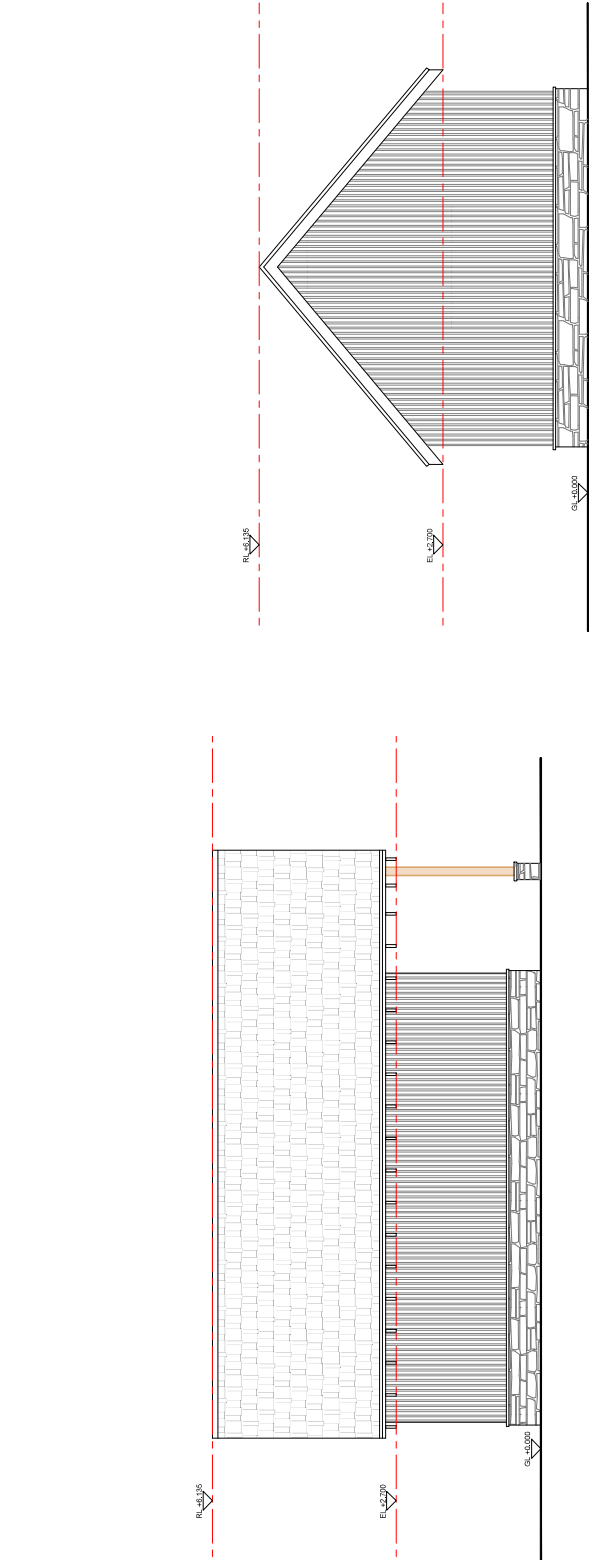
Development Site: Cargill Development			
Client: Freewheelin Ltd			
REV	DATE	BY	AMENDMENTS
 Stuart King Architecture & Design			
• 14 Cromarty Campus, Rosyth KY11 2WQ • Tel: 01333 257 022 • info@stuartkingarchitecture.com			
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DWG No: 18-01664 (2-) 02		Rev:	

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Proposed Side Elevation
Plot 2 (North) - Plot 3 (South)

Proposed Front Elevation
Plot 2 (South East) - Plot 3 (North West)

Development Site:
Cargill Development

Client:
Freewheelin Ltd

REV

DATE

BY

AMENDMENTS

SKA

Stuart King

Architecture & Design

14 Cromarty Campus, Rosyth KY11 2NS • Tel: 01383 257 022 • info@stuartkingarchitecture.com

SKAD Reference:
SKA 18-01664

Drawn By

Scale:
1/100

Date:
October 2019

Size:
A3

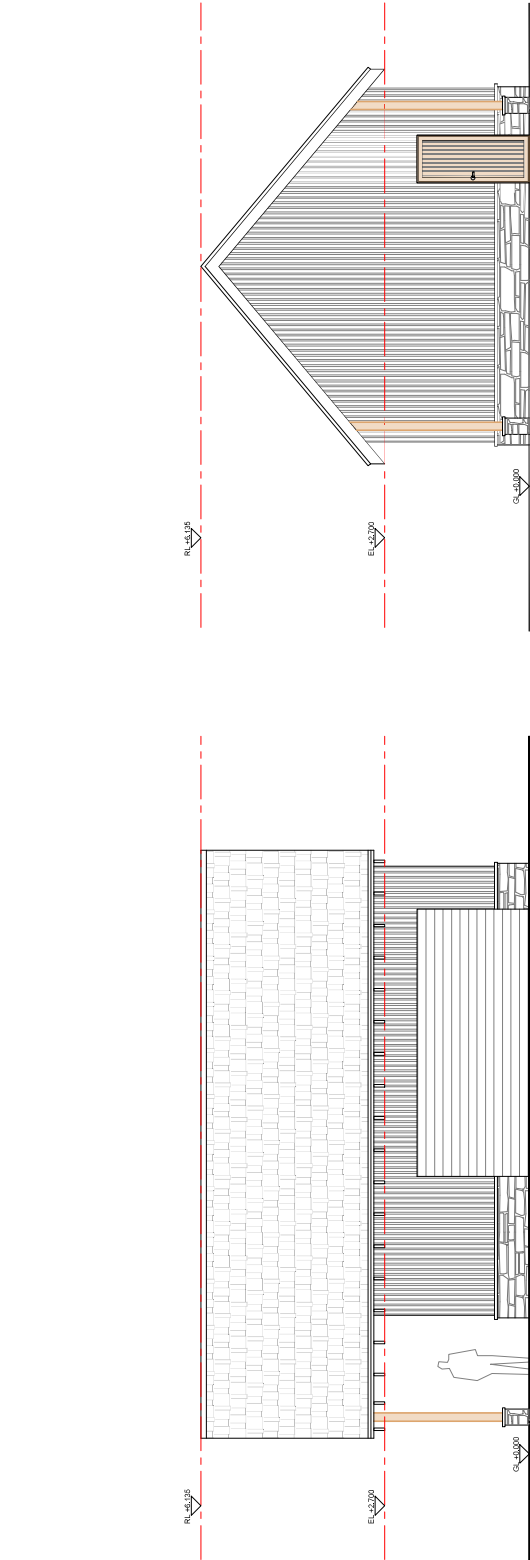
Drawing Title:

Proposed housing development of 4 dwellings at Cargill, Perthshire - 2 in No. Variations

Title Sheet:
Proposed Elevations HT1

DWG No:
18-01664 (2-) 11

Rev:



Proposed Side Elevation
Plot 2 (South) - Plot 3 (North)

Proposed Rear Elevation
Plot 2 (North West) - Plot 3 (South East)

Notes / Revisions:


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-

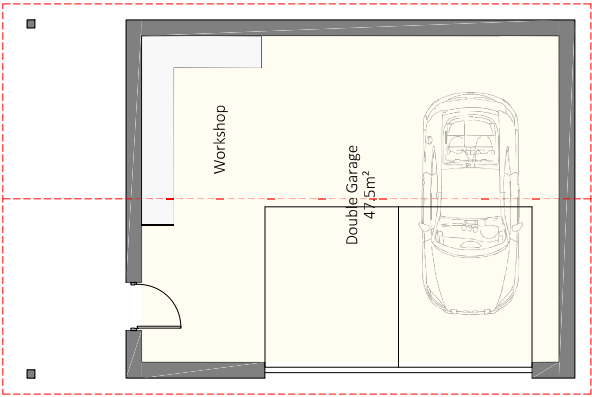
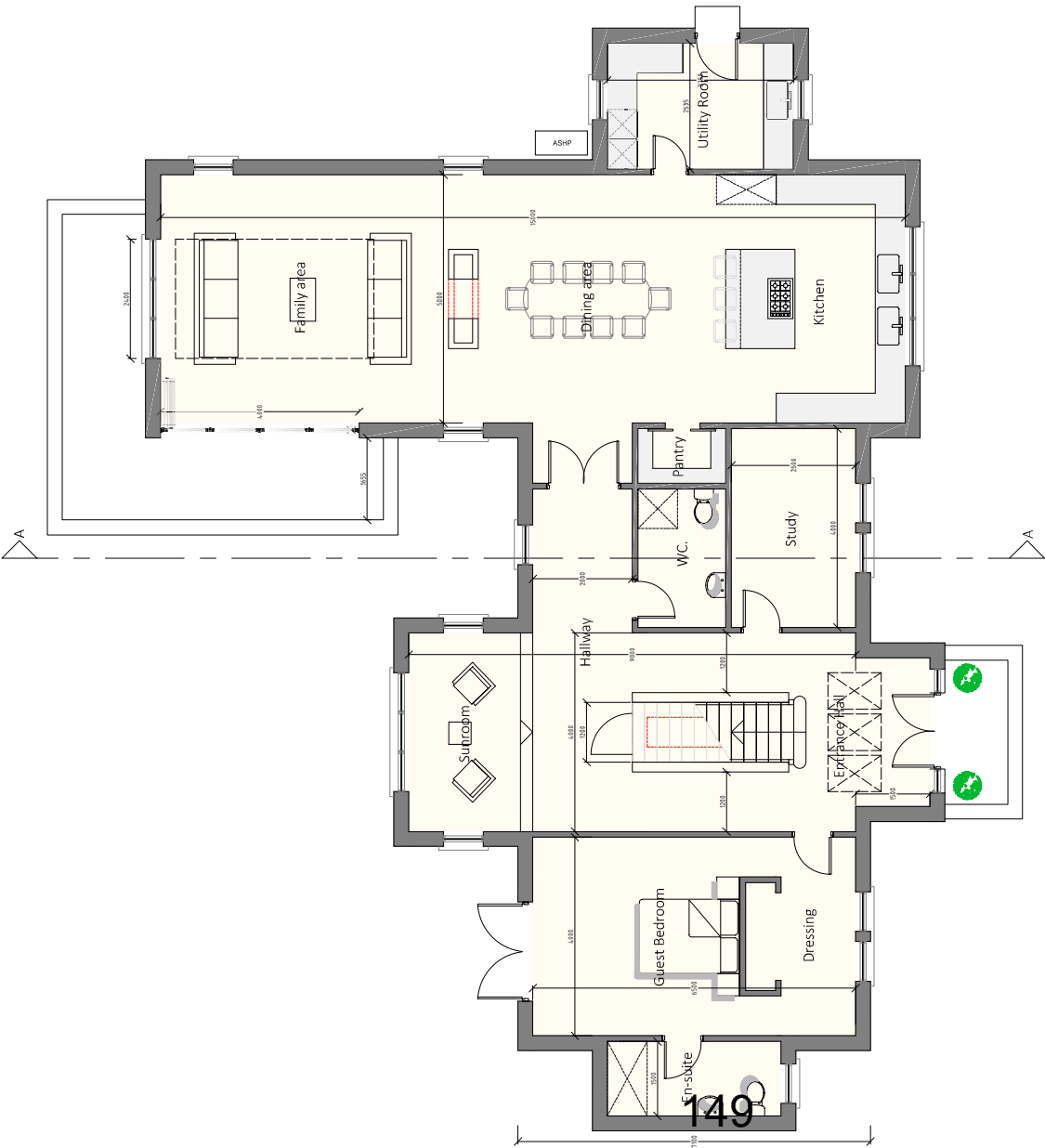
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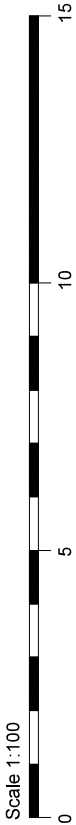
HT 1

Gross Internal Area = 137.7m²
Total Floor Area:
137.7m² + 102.8m² = 240.5m²

Development Site: Cargill Development							
Client: Freewheelin Ltd							
REV		DATE		BY		AMENDMENTS	
 Stuart King Architecture & Design				14 Cromarty Campus, Bonyh K11 2W6 • Tel: 01343 257 022 • info@stuartkingarchitecture.com			
SKAD Reference: SKA 18-01664				Drawn By: CS			
Scale: 1/100		Date: October 2019		Size: A3			
Drawing Title: Proposed housing development of 4 dwellings at Cargill, Perthshire - 2 in No. Variations							
Title Sheet: Proposed Ground Floor Plan - HT1							
DWG No: 18-01664 (2-) 01				Rev:			



Proposed Ground Floor Layout Plan

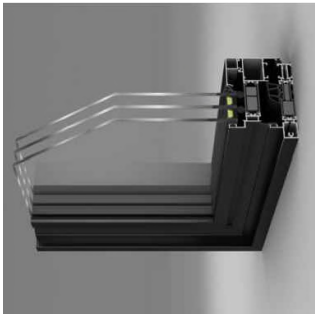




SILA A/B® 150x25, 100x25 and 47x25mm in vertical open rainscreen arrangement



Traditional 'Dark Blue Grey' Scottish slate
BS EN 12326-1:2004



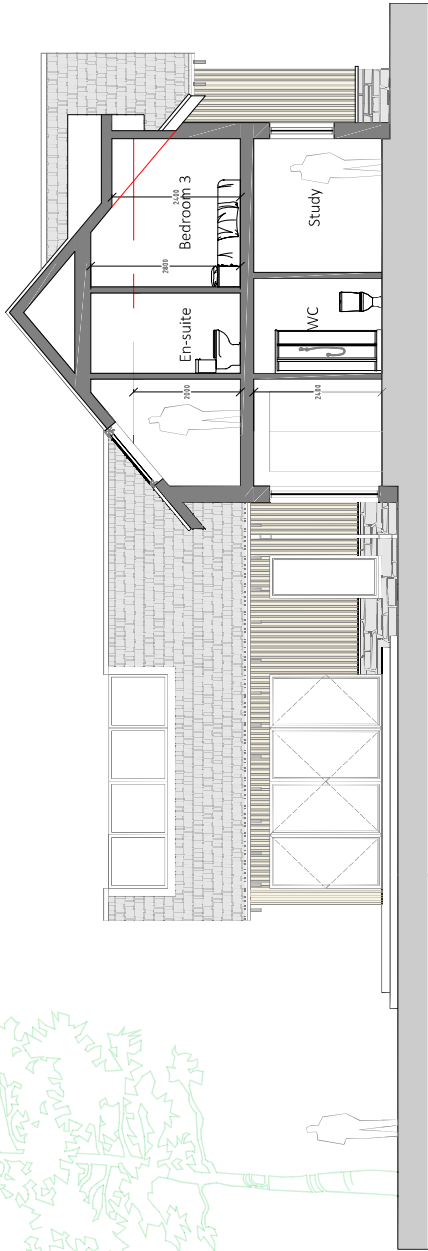
Slimline Aluminium double glazed argon filled doors and windows throughout



Smooth white faced render finish



Traditional Cut Cobblestone



Proposed Section A-A

Scale 1:100




Notes / Revisions:

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-

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Development Site: Cargill Development			
Client: Freewheelin Ltd			
REV	DATE	BY	AMENDMENTS
<div><div><div>Stuart King Architecture & Design</div></div><div>16 Cromarty Campus, Rosyth KY11 2WS • Tel: 01383 257 022 • info@stuartkingarchitecture.com</div></div>			
SKAD Reference: SKA 18-01664		Drawn By: CS	
Scale: 1/100	Date: October 2019	Size: A3	
Drawing Title: Proposed housing development of 4 dwellings at Cargill, Perthshire - 2 in No. Variations			
Title Sheet: Proposed Section A-A - HT1			
DWG No: 18-01664 (2-) 05		Rev:	

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Development Site:

Cargill Development

lient:

Freewheelin Ltd

REV	DATE
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10

AMENDMENTS

AMENDMENTS



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AD Reference:

Drawn B

File:	Date:
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Date:

Size:

Training Title:

Proposed housing development of 4 dwellings at Cargill, Perthshire - 2 in No. Variations

Title Sheet:

Proposed Elevations (Front & Rear) HT 2

WG No:

8-01664 (2-) 03

Scale 1:100

Proposed Rear (North West) Elevation
Plot 1 (South) - Plot 4 (North)

Proposed Front (South East) Elevation
Plot 1 (North) - Plot 4 (South)

Notes / Revisions:

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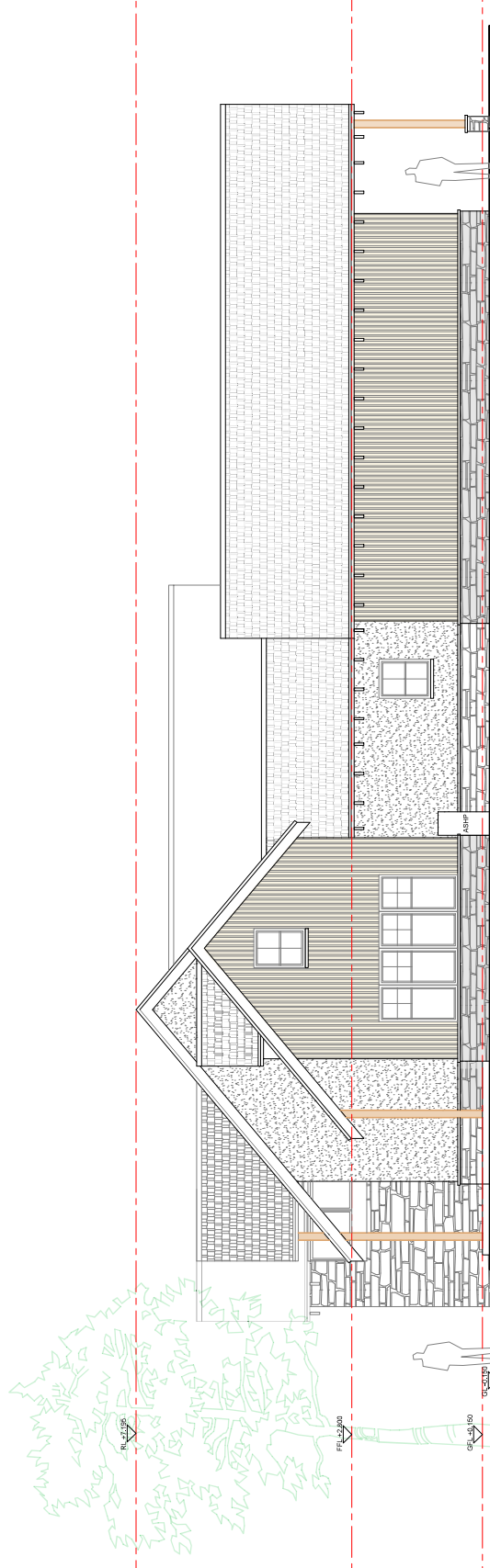
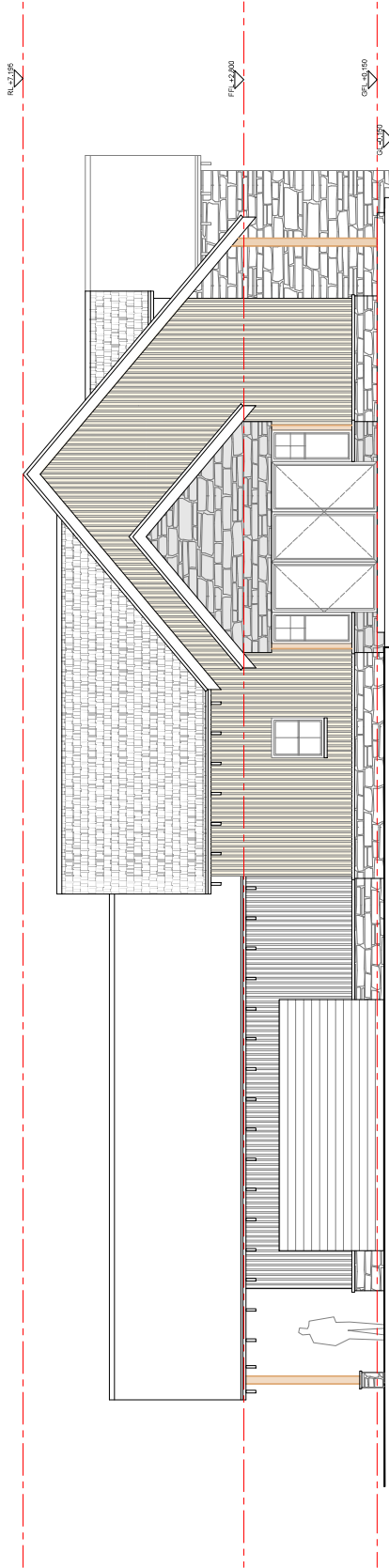
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Proposed Side (South West) Elevation
Plot 1 (South West) - Plot 4 (North East)



Proposed Side (North East) Elevation
Plot 1 (North East) - Plot 4 (South West)

Scale 1:100

0 5 10 15

Development Site:

Cargill Development

Client:

Freewheelin Ltd

REV

DATE

BY

AMENDMENTS

SKA

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Architecture & Design

SKAD Reference:

SKA 18-01664

Drawn By:

CS

Scale:

1/100

Date:

October 2019

Size:

A3

Drawing Title:

Proposed housing development of 4 dwellings at Cargill, Perthshire - 2 in No. Variations

Title Sheet:

Proposed Elevations HT 2

DWG No:

18-01664 (2-) 09

Rev:

Notes / Revisions:

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HT 2

Gross Internal Area = 116.14m²

Development Site:
Cargill Development

Client:
Freewheelin Ltd

REV	DATE	BY	AMENDMENTS



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Architecture & Design

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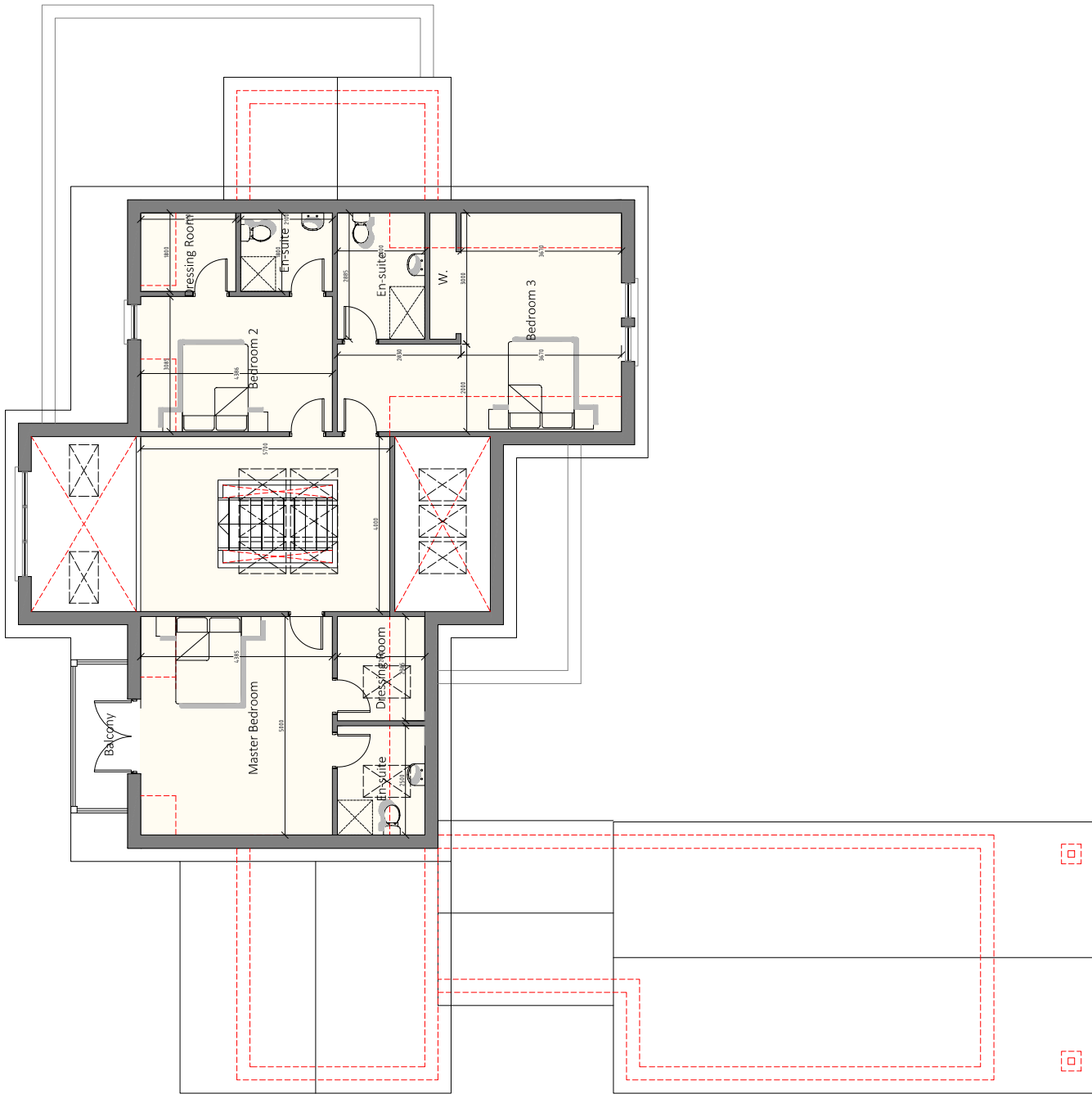
SKAD Reference: SKA 18-01664		Drawn By: CS	
Scale: 1/100	Date: October 2019	Size: A3	

Drawing Title:
Proposed housing development of 4 dwellings at Cargill, Perthshire - 2 in No. Variations

Title Sheet:
Proposed First Floor Plan HT 2

DWG No:
18-01664 (2-) 02

Rev:



Proposed Ground Floor Layout Plan



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HT 2

Gross Internal Area = 176.19m²

Total Floor Area:

176.19m² + 116.14m² = 292.33m²

Development Site:

Cargill Development

Client:

Freewheelin Ltd

SKA

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SKAD Reference:

SKA 18-01664

Drawn By:

CS

Scale:

1/100

Date:

October 2019

Size:

A3

Drawing Title:

Proposed housing development of 4 dwellings at Cargill, Perthshire – 2 in No. Variations

Title Sheet:

Proposed Ground Floor Plan HT 2

DWG No:

18-01664 (2-) 06

Rev:

The floor plan shows a rectangular house with a central entrance hall. To the left of the hall are a Guest Bedroom, a Bathroom, and an En-suite. To the right are the Kitchen, Dining area, and Family area. A Sun Room is located at the rear left. A Study is at the front left. A Utility Room and a large Workshop Area are at the front right, with a Garage attached to the Workshop. Dimensions are provided for most rooms and overall sections. A section line A-A runs through the center of the house.

Scale 1:100

0 5 10 15

Proposed Ground Floor Layout Plan

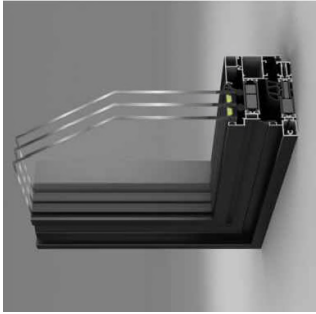
154



SILA A/B® 150x25, 100x25 and 47x25mm in vertical open rainscreen arrangement



Traditional 'Dark Blue Grey' Scottish slate
BS EN 12326-1:2004



Slimline Aluminium double glazed argon filled doors and windows throughout



Smooth white faced render finish



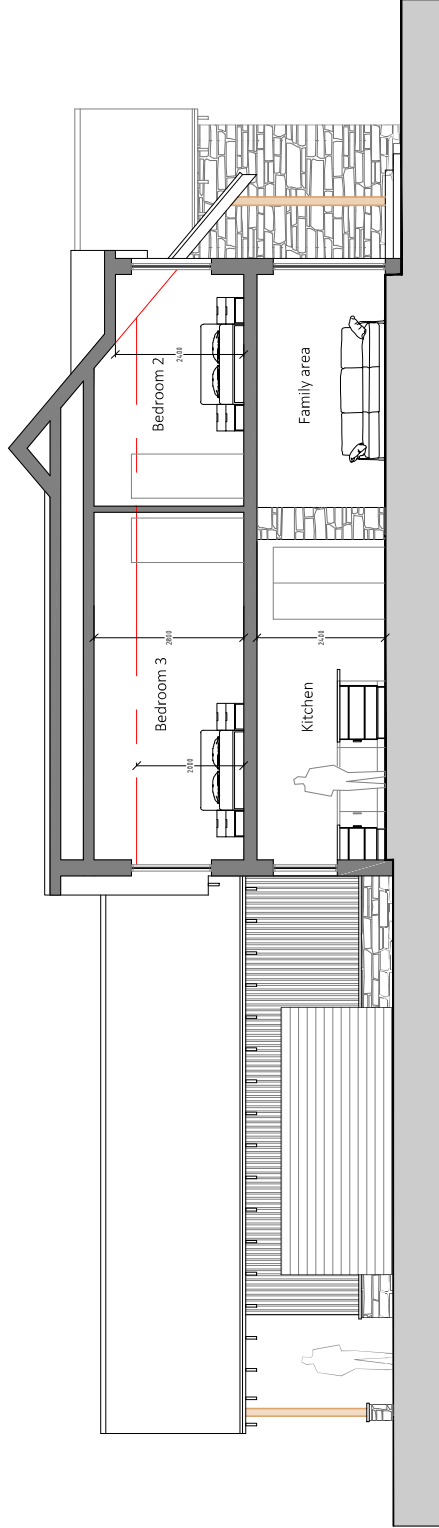
Traditional Cut Cobblestone

Notes / Revisions:

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Proposed Section A-A

Scale 1:100



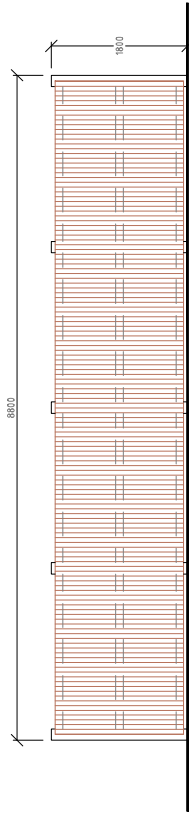
Development Site: Cargill Development										
Client: Freewheelin Ltd										
REV	DATE	BY	AMENDMENTS							
 Stuart King Architecture & Design										
16 Cromarty Campus, Rosyth KY11 2WQ • Tel: 01383 257 022 • info@stuartkingarchitecture.com										
SKAD Reference: SKA 18-01664		Drawn By: CS								
Scale: 1/100	Date: October 2019	Size: A3								
Drawing Title: Proposed housing development of 4 dwellings at Cargill, Perthshire - 2 in No. Variations										
Title Sheet: Proposed Section A-A - HT 2										
DWG No: 18-01664 (2-) 10		Rev:								

Notes / Revisions:

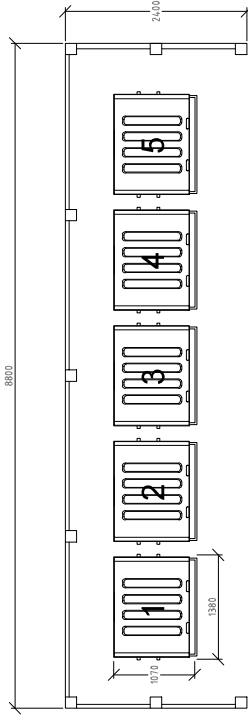
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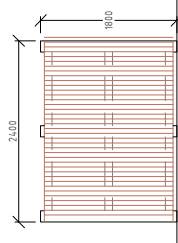
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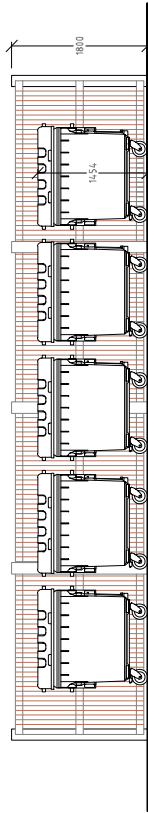
Rear (East) Elevation



Proposed Plan



Proposed Side (North/South) Elevation



Front (West) Elevation

Proposed Bin Store Detail 1:50

Scale 1:50



5

4

3


2

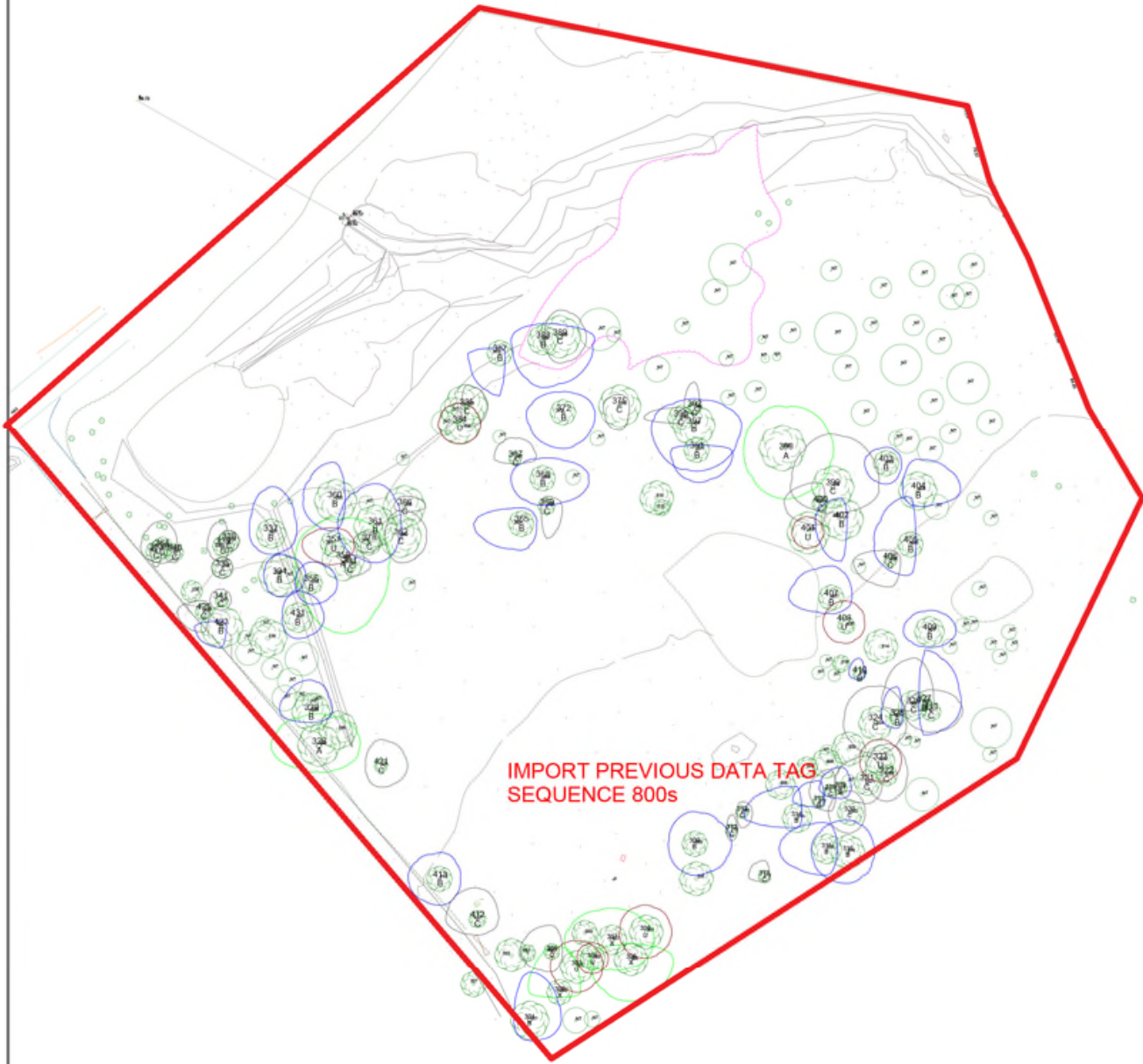
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0.5

0

10

Development Site		Cargill Development	
Client		Freewheelin Ltd	
REV	DATE	BY	AMENDMENTS
<div><div></div><div>Stuart King Architecture & Design</div></div> <div><div>• 10 Cowcross Street, South 101 2104 • Tel: 08 933 33 022 • info@stuartkingdesign.com</div></div>			
SACD Reference	Drawn By		
18-01664	CS		
Scale:	Date:	Size	
1:50	DEC 2019	A2	
Drawing Title		Proposed housing development of 4 dwellings at Cargill Perthshire - 2 in No. Variations	
Title Sheet			
Proposed Bin store			
DWG No:	18-01664 (0-) 4		
Rev:			



Adam Riedi

www.blebotreesurgery.co.uk

Tree constraints plan

SCALE :
1 : 1000 @ A4

DATE :
24/10/2019

MAP FILENAME :



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Crown Spread



Root Protection Area



Shading Arc



Category 'A'



Category 'B'



Category 'C'



Category 'U'

0

60m





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Shantixing
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21th November 2019

Ms E Tait
15 Bruce Drive
Murthly
PH1 4FD



SCOTTISH WATER

Development Operations
The Bridge
Buchanan Gate Business Park
Cumbernauld Road
Stepps
Glasgow
G33 6FB

Development Operations
Free phone Number - 0800 389 0379
E-Mail -
DevelopmentOperations@scottishwater.co.uk
www.scottishwater.co.uk

Dear Ms Tait,

**PH2 Cargill Wester Balhomie Land At
Pre-Development Enquiry Application – Capacity Review
Our Ref: 774700**

Number of housing units reviewed	4
----------------------------------	---

Thank you for your application regarding the above proposed development. Please note our reference number, which should be quoted on all future correspondence.

Following a capacity review we can now confirm the following:

Assessment of capacity at our treatment works:

- There is currently sufficient capacity in the Lintrathen Water Treatment Works to service your development.

Assessment of our network:

- There are no issues currently identified within our **water** network that would adversely affect the demands of your development.

Please note:

This response is valid for **12 months** from the date above and may be subject to further review

Waste Water

Unfortunately, according to our records there is no public Scottish Water, Waste Water infrastructure within the vicinity of this proposed development therefore we would advise applicant to investigate private treatment options.

Asset Impact Team

According to our records, the development proposals impact on existing Scottish Water assets. Please note that Scottish Water records are indicative only and your attention is drawn to the disclaimer at the bottom of this letter

The applicant must identify any potential conflicts with Scottish Water assets and contact our Asset Impact Team directly.

The applicant should be aware that any conflict with assets identified will be subject to restrictions on proximity of construction.

General notes:

- Scottish Water's current minimum level of service for water pressure is 1.0 bar or 10m head in the public main. Any property which cannot be adequately serviced using this pressure may require private pumping arrangements installed, subject to compliance with the current water byelaws.
- Scottish Water is unable to reserve capacity therefore connections to the water and wastewater networks can only be granted on a first come first served basis. For this reason we will review our ability to serve the development on receipt of an application to connect.
- Please be advised that Scottish Water will only accept surface water into the combined network under exceptional circumstances. In the consideration of any development, if due diligence has been carried out in fully investigating the available options for surface water drainage and if all of these options are subsequently deemed unreasonable to pursue, the remaining alternative options can then be considered for approval to allow the development to proceed.
- Unless stated on your PDE application, the drainage is assumed to propose to connect to our network via gravity without the use of a pumping station. If this is not the case then please let us know as soon as possible because Scottish Water would need to reassess this case.

Next steps:

If you would like to progress with connection(s) to the water network please submit the relevant application to our business team. Application forms and guidance can be found at <https://www.scottishwater.co.uk/Business/Connections>.

This response is in relation to the information you have provided in your application. If there are any changes to your proposed development you may be required to submit a new Pre-Development Enquiry application.

If you have any questions, please contact us at developmentoperations@scottishwater.co.uk or call us on 0800 389 0379, quoting your reference number and a member of our team will be happy to assist you.

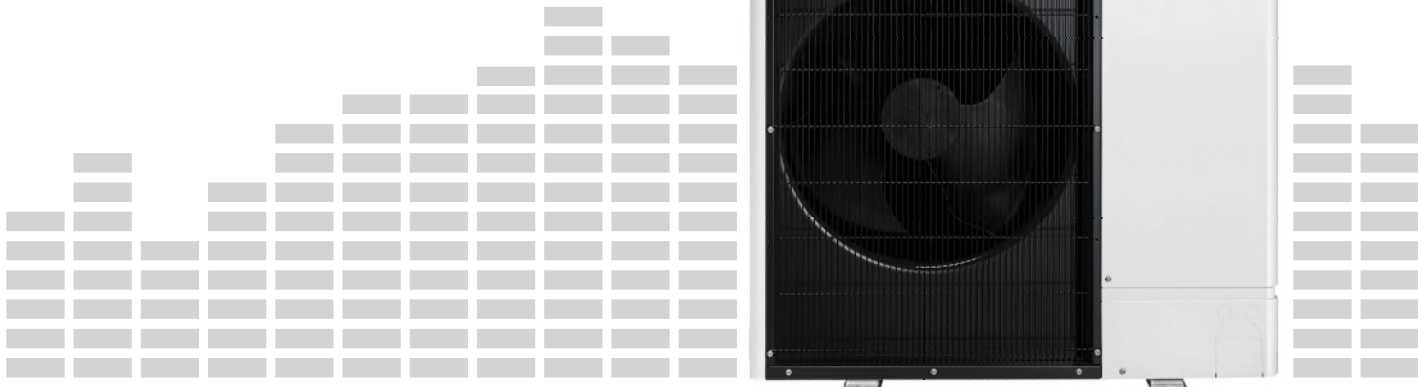
Yours sincerely

Holly Henderson
Development Operations Technical Analyst
Holly.Henderson@scottishwater.co.uk

Scottish Water Disclaimer

"It is important to note that the information on any such plan provided on Scottish Water's infrastructure, is for indicative purposes only and its accuracy cannot be relied upon. When the exact location and the nature of the infrastructure on the plan is a material requirement then you should undertake an appropriate site investigation to confirm its actual position in the ground and to determine if it is suitable for its intended purpose. By using the plan you agree that Scottish Water will not be liable for any loss, damage or costs caused by relying upon it or from carrying out any such site investigation."

Ultra Quiet Ecodan



3 Times Quieter than previous equivalent models,
virtually eliminating planning restrictions

58 dB(A)
Sound Power
Level



45 dB(A)
Sound Pressure
Level at 1m

Our market leading Ecodan air source heat pumps are designed to provide a home with reliable, trouble free renewable heating and hot water.

The New Ultra Quiet Ecodan takes air source heat pumps to the next level

These new models offer superb style, market leading energy efficiency and sound levels. Designed especially for residential applications the 8.5kW and 11.2kW units are **3 times quieter than previous models, virtually eliminating planning restrictions.**



Typical sound pressure levels:



120 dB(A)



80 dB(A)



60 dB(A)



40 dB(A)

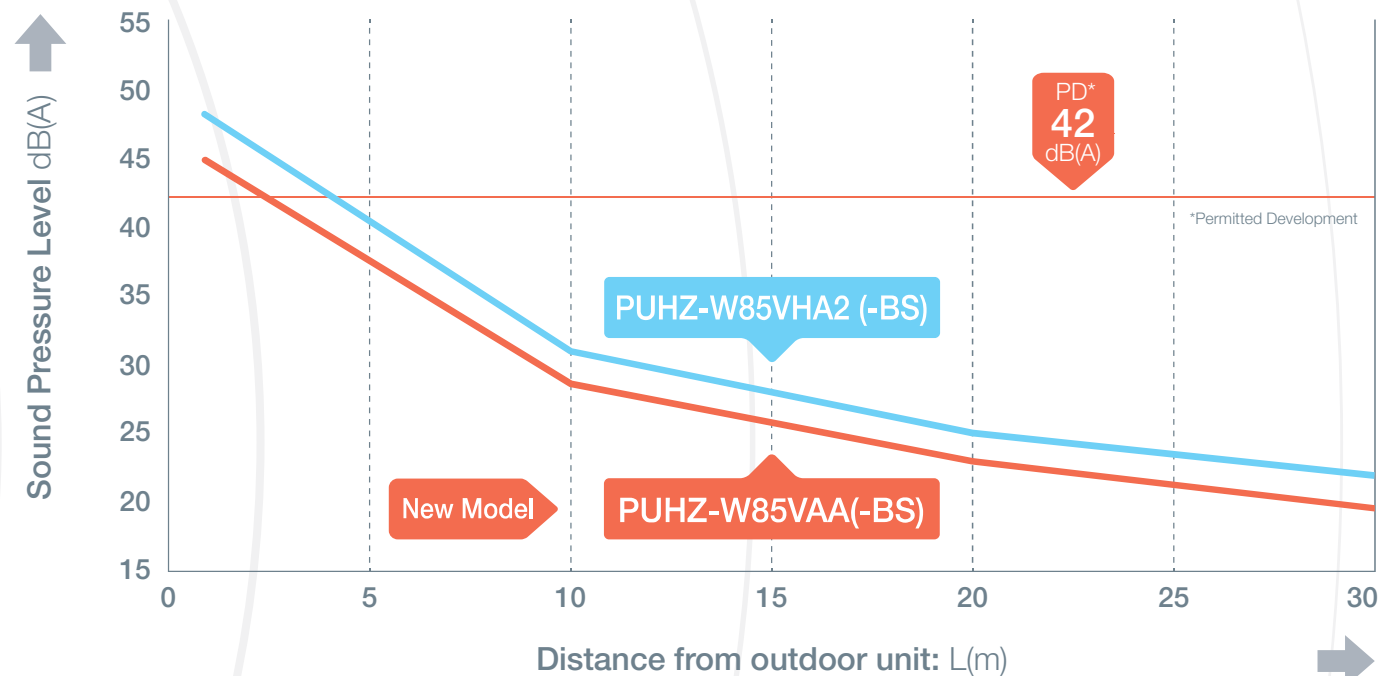
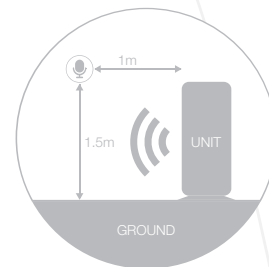
This means the Ultra Quiet Ecodan has a sound pressure level similar to a **Library.**

Estimated Noise Levels

Based on the distance from the outdoor unit

Annotation and Measurement Condition

1. Sound data was measured once unit operation was stable.
2. Sound reflection from ground and surrounding walls is not considered.



Low Sound = Heat Pump Placement Flexibility

One of the regulations under **Permitted Development**, is that the sound pressure level of an air source heat pump must not exceed 42dB(A) 1m from the neighbours nearest room (Assessment Position).

With class leading **sound power levels of just 58dB(A)**, the Ultra Quiet Ecodan air source heat pump can be located much closer to the assessment position and **pass planning**.

This ultra quiet performance means you can now choose the most convenient location for your Ecodan, causing no disturbance to neighbours.



ultraquietecodan.co.uk





PUHZ-W85VAA: MCS Ref: HP0002/45
 PUHZ-W85VAA-BS: MCS Ref: HP0002/46
 PUHZ-W112VAA: MCS Ref: HP0002/47
 PUHZ-W112VAA-BS: MCS Ref: HP0002/48



Manufactured in the UK



OUTDOOR UNIT		PUHZ-W85VAA(-BS)	PUHZ-W112VAA(-BS)
HEAT PUMP SPACE HEATER - 55°C	ErP Rating	A++	A++
	η_s	137%	133%
	SCOP	3.50	3.40
HEAT PUMP SPACE HEATER - 35°C	ErP Rating	A++	A++
	η_s	171%	170%
	SCOP	4.35	4.34
HEAT PUMP COMBINATION HEATER - Large Profile ¹	ErP Rating	A	A
	η_{wh}	104%	100%
HEATING ² (A-3/W35)	Capacity (kW)	8.3	11.0
	Power Input (kW)	2.86	3.73
	COP	2.90	2.95
OPERATING AMBIENT TEMPERATURE (°C DB)		-20 ~ +35°C	-20 ~ +35°C
SOUND DATA ³	Pressure Level at 1m (dBA)	45	47
	Power Level (dBA) ⁴	58	60
WATER DATA	Pipework Size (mm)	28	28
	Flow Rate (l/min)	25.8	32.1
	Water Pressure Drop (kPa)	16.1	24.4
DIMENSIONS (mm) ¹⁷	Width	1050	1050
	Depth	480	480
	Height	1020	1020
WEIGHT (kg)		97	118
ELECTRICAL DATA	Electrical Supply	220-240v, 50Hz	220-240v, 50Hz
	Phase	Single	Single
	Nominal Running Current [MAX] (A)	9.1 [22.0]	10.9 [28.0]
	Fuse Rating - MCB Sizes (A) ⁶	25	32
REFRIGERANT CHARGE (kg) / CO ₂ EQUIVALENT (t)		R410A (GWP 2088) 2.4/5.01	3.3/6.89

¹ Combination with EHPT20X-MHCW Outdoor. ² Under normal heating conditions at outdoor temp: -3°CDB / -4°CWB, outlet water temp 35°C, inlet water temp 30°C.

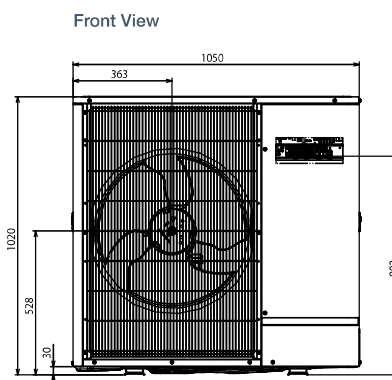
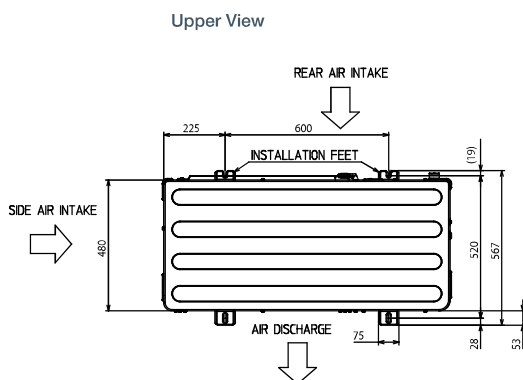
³ Under normal heating conditions at outdoor temp: 7°CDB / 6°CWB, outlet water temp 55°C, inlet water temp 47°C as tested to BS EN14511. ⁴ Sound power level tested to BS EN12102. ⁵ MCB Sizes BS EN60898-2 & BS EN60947-2.

⁶ Flow Temperature Controller (FTC) for standalone systems PAC-F062B-E Dimensions WxDxH (mm) - 520x150x450

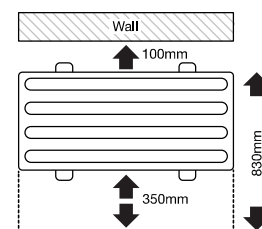
η_s is the seasonal space heating energy efficiency (SSHEE) η_{wh} is the water heating energy efficiency

Product Dimensions

PUHZ-W85 / 112VAA(-BS)



Required Space



The space required in front of the unit is 350mm.



Telephone: 01707 278666

email: heating@meuk.mee.com

web: heating.mitsubishielectric.co.uk

UNITED KINGDOM Mitsubishi Electric Europe Living Environment Systems Division
 Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England General Enquiries Telephone: 01707 282880 Fax: 01707 278881
 IRELAND Mitsubishi Electric Europe Westgate Business Park, Ballymount, Dublin 24, Ireland
 Telephone: Dublin (01) 419 8800 Fax: Dublin (01) 419 8890 International code: (00353)1

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Note: The fuse rating is for guidance only. Please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774) or R134a (GWP:1430). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows, R410A (GWP:1975), R32 (GWP: 650), R407C (GWP:1650) or R134a (GWP:1300).



Effective as of April 2018 SAP No. 338239



www.greengateway.mitsubishielectric.co.uk

Mitsubishi Electric UK's commitment to the environment



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Follow us @green_gateway



Mitsubishi Electric
Living Environmental Systems UK



mitsubishielectric2



thehub.mitsubishielectric.co.uk



FREE
TRAINING
PROVIDED



The EASY, QUICK AND COST-EFFECTIVE alternative to traditional construction

Manufactured in the UK, Durisol is the original insulated concrete formwork (ICF), the reliable alternative to cavity masonry, brick and block, block and block and timber-frame construction, successfully used for build projects across Europe since 1947.



Durisol wall form units are QUICK, EASY and COST-EFFECTIVE to construct.

The Durisol System

Durisol wall form units are interlocking modules made from woodcrete which are available pre-insulated or without PIR insulation. They are dry stacked without mortar joints in a half bond format up to 2.5 metres freestanding per concrete pour.

The units are in-filled with concrete to form a monolithic structural walling system. The chosen finish, applied directly to the external and internal wall faces completes the wall.



The simple construction method means building with Durisol does not require specialist tradespeople.



THE ORIGINAL ICF SYSTEM



Performance

- As the first ICF ever produced, Durisol is the most proven formwork on the market with a track record spanning over 70 years.
- The U-values and PSI values that are possible with Durisol exceed UK building regulation requirements and surpass typical traditional cavity and timber frame construction values.
- Durisol wall form units have attained European levels of fire resistance, which are considerably higher than the UK regulations. Durisol has a 90-minute certified fire rating but has been tested to six hours.

Cost-Efficiency

As the costs for skilled tradespeople and traditional build materials continue to rise, Durisol offers a competitively priced alternative.

Operatives can be quickly and easily trained to build with Durisol reducing the reliance on specialist tradespeople and helping to contain project costs.



The quick construction method also reduces the likelihood of potential project delays that increase the build budget.

Speed



The simplicity of the system means that **building with Durisol is fast.**

Depending on the site, size and specification it is possible to complete the structure of a pair of three-bedroomed semi-detached houses in just five days.

Furthermore, Durisol construction can continue in all weathers, even sub-zero temperatures keeping the build programme on track with no costly delays due to inclement weather.

Sustainability

Recycled material, softwood aggregates that are by-products of the timber industry are used to make the Durisol wall form units. The low-energy manufacturing process does not create any waste.

The thermal mass of the Durisol wall form units creates a buffer which limits large swings in temperature within a building, enhancing the efficiency of any heating system and saving on fuel consumption.

Technical Facts and Figures

- U-values
as low as 0.15 w/m²k
- Average PSI values
in the range of 0.04 - 0.08
- High performance level of air tightness**
in conjunction with final wall finishes

Durisol meets all current and upcoming building regulation requirements. The product is BBA certified, technically approved by LABC and is compliant as walling material with the current British Building Regulations.



Technical Data

All Durisol wall form units share common basic dimensions of 500mm length x 250mm height.

Durisol component designations are derived from their dimensions and structural design.

Examples shown are all D365/120 units with **S**, **F** and **C** configurations:



Product Range		Shipping Weight (kg)	U-Values With PIR	Structural Core Size (mm)	m ³ Concrete/ m ² Wall
Product Code and Specification					
D170/120S 	Standard	6.5		120	0.092
	Face	7			
D250/180S 	Standard	10.5		180	0.144
	Face	11			
D300/120S 	Standard	12.5	0.23	120	0.096
	Face	13			
	Corner	13.5			
D365/120S 	Standard	14.5	0.15	120	0.096
	Face	15			
	Corner	15.5			



Telephone: **01495 249400**

Email: enquiries@durisoluk.com

www.durisoluk.com



Durisol UK, Parkway, Pen-y-Fan Industrial Estate, Crumlin, Gwent, NP11 3EF

MECHANICAL VENTILATION WITH HEAT RECOVERY (MVHR)

A close-up photograph of a white Nuaire Eco Range mechanical ventilation unit. The unit has a curved, modern design. Two blue and grey heat exchanger cores are visible, mounted on the front panel. The Nuaire logo is printed in blue on the right side of the unit.

nuaire

**NEW
ECO
RANGE**

Proud to Build British

► Nuaire is a world leader in the design and manufacture of fans and ventilation systems. We put our energy into efficient ventilation so you don't waste yours.

Nuaire is a British company that designs and manufactures innovative ventilation products for the residential and commercial sectors. We are proud to be recognised for our expertise, commitment to innovation and the outstanding quality of our products and customer service. Our people are at the heart of Nuaire, we have more than 400 experienced staff based at our headquarters, with a further 65 technical sales engineers throughout the UK and Ireland.



Getting it right from the start

Nuaire's Technical Application team can offer expert advice and support on design. Services include supporting 3D Revit designs which illustrate your choice of product, ducting and ancillaries. This bespoke package enables correct selection and aids project management and site control.

As well as a simple, clean system layout in 3D showing ventilation, Nuaire provides a complete parts list with installation visuals.



Bespoke Design Services

Nuaire are here for you every step of the way, providing a simple, quick selection or offering advice on compliance with the very latest building regulations and environmental issues.



Technical Advice Compliance on SAP PCDB

Stay ahead of the latest building regulations and make the best product and fabric choices.



The Full Service

Help with product selection, detailed parts lists and fast delivery ensure you meet your deadline and budget.



Over 65 Sales Staff

A strong field based sales team to support projects throughout the country.



Gold Star Aftercare

Our comprehensive product warranty and dedicated after sales support gives you peace of mind.

MECHANICAL VENTILATION WITH HEAT RECOVERY (MVHR - System 4)

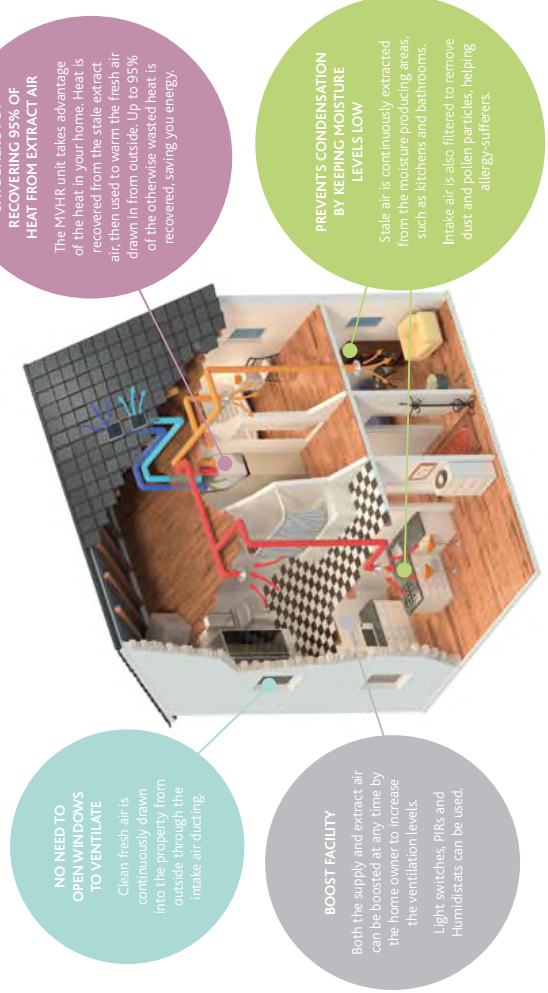
ACHIEVES
100%
DUTY IN BYPASS
MODE

Mechanical Ventilation with Heat Recovery (MVHR) is fast becoming the most popular strategy for effective whole home ventilation for new build properties.

Solutions for MVHR applications

Nuaire offer the widest range of solutions for MVHR applications, including wall and ceiling mounted heat recovery systems. With up to 95% heat efficiencies and 100% duty in Summer bypass, our MVHR range delivers the maximum energy savings.

MVHR How does it work?



	MRXBOX-ECO2	MRXBOXAB-ECO2	MRXBOX-ECO3	MRXBOXAB-ECO3	MRXBOXAB-ECO4	MRXBOXAB-ECO-LP2
Page no.	6	6	12	12	18	24
Size (W x H x Dmm)	607x507x356	607x507x356	658x623x432	658x623x432	710x710x585	900x200x700
Weight	20kg	20kg	24kg	24kg	44kg	37kg
Filters	G3	G3	G3	G3	G3	G3
Summer bypass	No	Yes	No	Yes	Yes	Yes
Recognised & listed on PCDB 'Summer bypass'	n/a	Yes	n/a	Yes	Yes	Yes
Maximum floor area (m²)	150	150	185	185	250	150
Maximum no of wet rooms (SAP 2009)	Kitchen + 7	Kitchen + 7	Kitchen + 7	Kitchen + 7	Kitchen + 7	Kitchen + 6
Specific fan power (SAP 2009 down to)	0.45	0.49	0.44	0.46	0.56	0.54
Heat Recovery % (SAP 2009 up to)	90	90	91	90	94	79
Maximum no of wet rooms (SAP 2012)	Kitchen + 5	Kitchen + 5	Kitchen + 7	Kitchen + 7	Kitchen + 7	Kitchen + 5
Specific fan power (SAP 2012 down to)	0.47	0.52	0.47	0.50	0.62	0.59
Heat Recovery % (SAP 2012 up to)	89	90	91	90	94	79
3rd speed (enhanced airflow)	Yes	Yes	Yes	Yes	Yes	Yes
Spigot size	125mm dia	125mm dia	150mm dia	150mm dia	200mm dia	204mm x 60mm
Opposite handed unit code	MRXBOX-ECO2-OH	MRXBOXAB-ECO2-OH	MRXBOX-ECO3-OH	MRXBOXAB-ECO3-OH	MRXBOXAB-ECO4-OH	MRXBOXAB-ECO-LP2-OH

Ancillaries	Yes	Yes	Yes	Yes	Yes	Yes
Optional Sensors available	Yes	Yes	Yes	Yes	Yes	Yes
Acoustic Solution - 4-way Silencer	MRXBOX-SIL2	MRXBOX-SIL2	MRXBOX-SIL3	MRXBOX-SIL3	MRXBOX-SIL4	n/a
Acoustic Solution - First Fix Box	MRXBOX-HF2	MRXBOX-HF2	MRXBOX-HF3	MRXBOX-HF3	MRXBOX-HF4	n/a
Acoustic Solution Silencer + First Fix Box	MRX-BOX-SIL2+HF2	MRXBOX-SIL2+HF2	MRX-BOX-SIL3+HF3	MRXBOX-SIL3+HF3	MRXBOX-SIL4+HF4	n/a
Visual System Controller Compatible	Yes	Yes	Yes	Yes	No	Yes

MRXBOXAB-ECO2 MRXBOX-ECO2 and Opposite Handed versions

ACHIEVES
100%
DUTY IN BYPASS
MODE

The MRXBOXAB-ECO2 has been designed with automatic 100% bypass as listed on the SAP Product Characteristics Database (PCDB).

Due to its intelligent and smart design, there will be no reduction in airflow when operating in bypass mode resulting in enhanced performance.

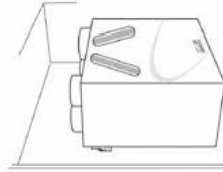
Both the MRXBOXAB-ECO2 and the MRXBOX-ECO2 are designed to provide optimised balanced (supply and extract) mechanical ventilation with heat recovery and both are listed on the PCDB.

The units operate by continuously extracting moisture-laden air from 'wet' rooms within the property and at the same time drawing in fresh supply air from outside. The heat from the extracted stale air is recovered via a heat exchanger inside the heat recovery unit which becomes tempered then filtered before supplying into the habitable rooms, creating comfortable and well ventilated homes.

The heat exchanger block within these units can recover up to 95% of the normally wasted heat. The two independent fans have full-speed control for background and boost ventilation rates. The MRXBOXAB-ECO2 has a summer bypass function. This feature activates automatically and attempts to maintain the home at a comfortable temperature. For example, if the outside temperature is warmer than the inside, the unit will continue to draw air through the heat exchanger. If the house is warmer than outside, the unit will bypass the heat exchanger and draw air in directly from outside.

Typical Installation

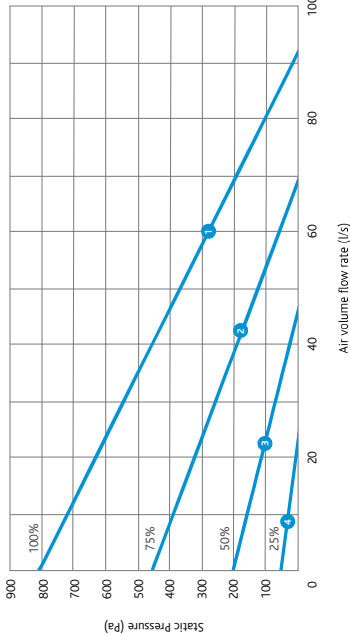
INSTALLATION FEATURES



Typical cupboard installation of MRXBOXAB-ECO2



Performance – MRXBOXAB-ECO2



CODE DESCRIPTION

MRXBOXAB-ECO2

Wall mounted unit with 100% bypass and integral humidistat.

MRXBOX-ECO2

Wall mounted unit.

MRXBOXAB-ECO2-OH

Opposite handed configuration wall mounted unit with 100% bypass and integral humidistat.

MRXBOX-ECO2-OH

Opposite handed configuration wall mounted unit.

Electrical & Sound

	Maximum power consumption		Sound Power Levels dB re 1pW (Frequency Hz)								dBA @3m
Curve	(Watts)		63	125	250	500	1k	2k	4k	8k	
1	155	Open inlet	48	52	59	55	50	46	35	27	
		Open outlet	60	67	69	69	64	64	54	46	
		Breakout	59	60	58	59	49	46	35	27	40
2	69	Open inlet	44	47	57	50	45	41	30	21	
		Open outlet	55	63	63	65	60	59	49	40	
		Breakout	56	57	53	52	44	40	28	18	34
3	19	Open inlet	39	38	48	40	35	29	16	<16	
		Open outlet	48	54	53	55	49	47	35	24	
		Breakout	43	48	44	42	34	29	<16	<16	24
4	7	Open inlet	38	31	27	23	<16	<16	<16	<16	
		Open outlet	38	34	31	31	22	<16	<16	<16	
		Breakout	37	31	24	20	<16	<16	<16	<16	<16

The maximum power consumption shown above (Watts) is consumed on units running continuously, not taking into account any heat recovery saving and based on SAP Product Characteristic Database (PCDB) testing. The breakout case-radiated dBA values are given for Hemispherical free field radiation at 3m - to obtain the Spherical radiated data, subtract 3 dBA.

Please note: Sound data is provided at a particular duty point for 25%, 50%, 75% and 100%. For accurate sound data at a specific speed duty, please use Nuaire's fan selector or call the office on 029 2085 8500.

Standard Handling



Plan View

Opposite Handling



Plan View

SAP 2009 Test Results

Product Code Application	MRXBOXAB-ECO2			MRXBOX-ECO2		
	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant
Kitchen + 1 Wet Room	0.49	90%	Yes	0.46	90%	Yes
Kitchen + 2 Wet Room	0.50	90%	Yes	0.45	89%	Yes
Kitchen + 3 Wet Room	0.58	89%	Yes	0.50	89%	Yes
Kitchen + 4 Wet Room	0.69	88%	Yes	0.60	88%	Yes
Kitchen + 5 Wet Room	0.81	87%	Yes	0.70	87%	Yes

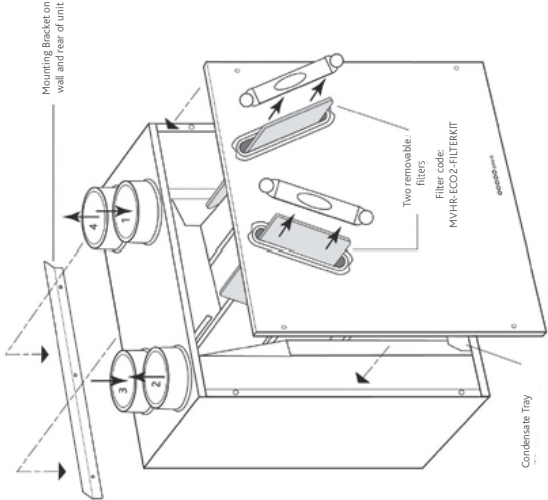
SAP 2012 Test Results

Product Code Application	MRXBOXAB-ECO2			MRXBOX-ECO2		
	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant
Kitchen + 1 Wet Room	0.52	90%	Yes	0.47	89%	Yes
Kitchen + 2 Wet Room	0.59	89%	Yes	0.54	88%	Yes
Kitchen + 3 Wet Room	0.77	87%	Yes	0.66	87%	Yes
Kitchen + 4 Wet Room	1.00	86%	Yes	0.85	87%	Yes
Kitchen + 5 Wet Room	1.23	86%	Yes	1.05	86%	Yes

General Arrangement

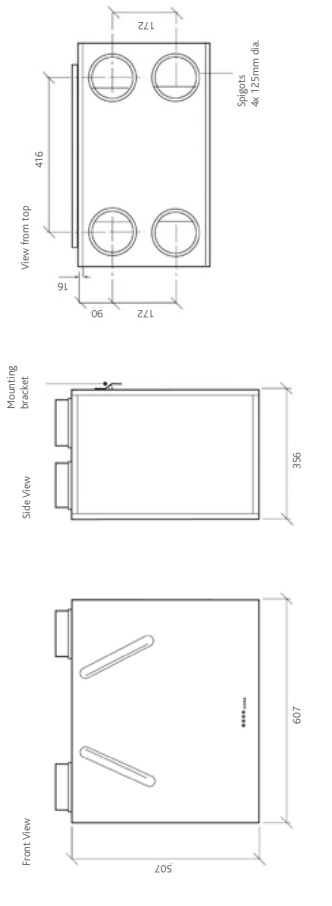
SPIGOT LOCATION & DUCTING REFERENCES

- Spigot 1, 125mm dia. = Extract air from dwelling.
- Spigot 2, 125mm dia. = Discharge air to outside.
- Spigot 3, 125mm dia. = Intake air from outside.
- Spigot 4, 125mm dia. = Supply air to property



Technical - MRXBOX(AB)-ECO2

DIMENSIONS (mm)
Weight - 20kg



Electrical Details

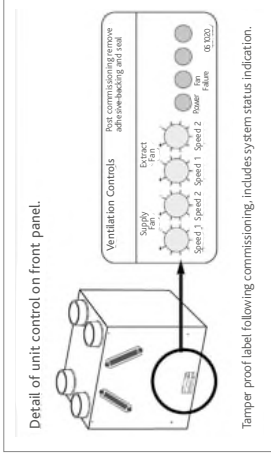
Please note: The electrical connection of the unit must be carried out by a qualified electrician.

The unit is supplied with a flexible cord for connection to the mains supply.

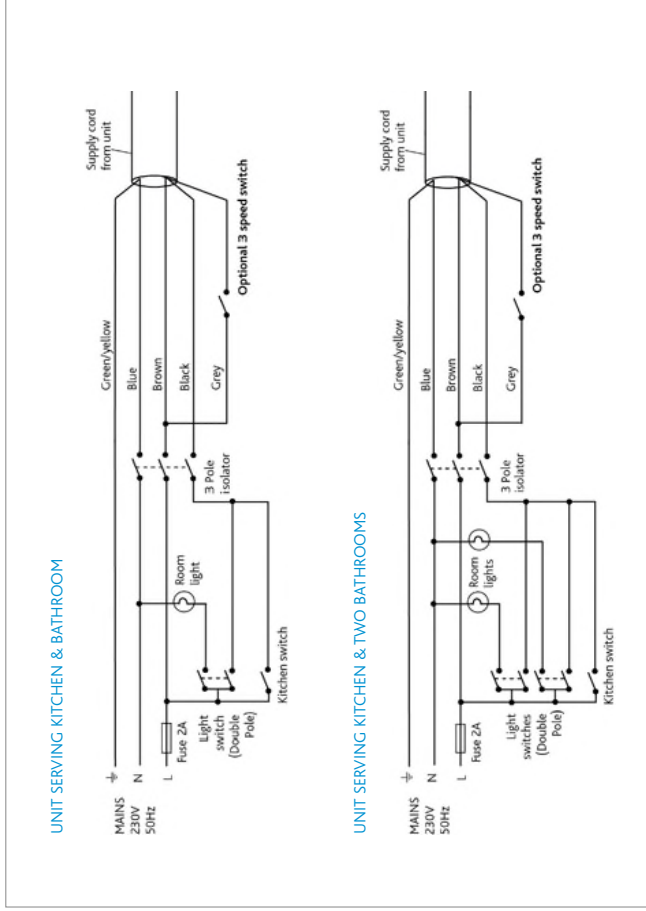
NOTE: This unit must be earthed.

The mains power supply cable should be connected to a fixed wiring installation in accordance with current IEE wiring regulations.

Electrical Details: MRXBOX(AB)-ECO2	
Voltage:	230V 1ph 50Hz
Consumption:	1.2 Amp



Wiring – MRXBOX(AB)-ECO2



Optional Sensors and Detectors

Customise MRXBOX(AB)-ECO2 for enhanced performance. All supplied with pre-plugged 10m data cable and incorporates status LED.

MRXBOX95-PIR (Passive Infrared)

A low voltage sensor, detects movement and activates system. Incorporates overrun timer and timer adjustments.

MRXBOX95-HUM (Relative Humidity)

A low voltage sensor, activates the system when the RH level is above set point. Incorporates overrun timer and RH setpoint level adjustment.

MRXBOX95-RFI (Remote Fail Indicator)

If fan failure occurs, the audio visual indicator will flash a warning.



MRXBOX-VSC
CONTROL SCREEN
COMPATIBLE WITH
THIS UNIT

Consultants Specification

SPECIFICATION

The unit shall be fully insulated providing excellent thermal and acoustic characteristics and shall be complete with a multi-plate, counter-flow, high-efficiency heat exchanger block, with a thermal efficiency of up to 95%. The heat exchanger shall be protected by G3 grade filters on fresh air inlet and system extract. The heat exchanger and filters shall be accessible via the front access panel, enabling quick and easy maintenance.

The unit shall have low energy, high-efficiency EC fan/motor assemblies with sealed for life bearings, the impellers shall be backward-curved centrifugal type. The motors shall be suitable for an ambient temperature of 40°C.

The unit shall be supplied complete with an insulated condensate drip tray and 21.5mm drain connection.

The unit shall be suitable for 125mm circular ducting.

Note: The unit is also available in opposite handed format, refer to spigot configuration for set up.

The breakout noise level and power requirements shall be as detailed by the unit manufacturer and in accordance with the ventilation equipment schedule.

Units shall be MRXBOX-ECO2 or MRXBOXAB-ECO2 as manufactured by Nuaire and shall be listed on the SAP PCDB.

MRXBOX-ECO2-OH and MRXBOXAB-ECO2-OH are opposite handed assemblies compliant as per standard handed versions listed in SAP PCDB.

OPERATION

The supply and extract system shall be positioned as indicated on the drawings and shall be in accordance with the particular fan schedule in the specification.

The combined supply and extract with heat recovery unit shall supply filtered fresh air to each of the habitable rooms and moisture-laden air shall be extracted from all wet areas, e.g. bathroom, en suite, w.c. kitchen, utility rooms etc. The supply air shall be pre-heated by the warm extract air via the integrated counter-flow heat exchanger element. The extracted air shall also be filtered before it reaches the heat exchanger block.

The ventilation unit shall vary its speed and therefore the ventilation rate, as it receives signals from one of the following:

- Switched live signal from light/remote switches.

When signals are received, the fan shall alter its speed to adjustable, normal and boost rates.

The unit shall have the facility to commission the supply and extract fans independently on minimum speed (continuous background ventilation) and boost speed via inbuilt minimum and maximum speed adjustment. The fans shall have infinitely variable speed control.

INTEGRAL AUTOMATIC HX BYPASS WITH NO REDUCTION IN AIRFLOW (MRXBOXAB-ECO2 & MRXBOXAB-ECO2-OH)

The bypass damper shall open automatically via a wax actuator, allowing the air to bypass the heat exchanger to deliver fresh filtered air during the warmer months.

The automatic bypass diverts 100% airflow around the heat exchanger with no reduction in airflow as independently tested by the BRE.

INTEGRAL HUMIDITY SENSOR (MRXBOXAB-ECO2 & MRXBOXAB-ECO2-OH)

The integral humidity sensor incorporated within the extract fan chamber will automatically boost both the extract and supply fan, to the commissioned boost speed, when the humidity level exceeds that set by the front panel mounted adjustment potentiometer.

CONTROL OPTIONS

All versions shall have the following functions integrally mounted within the fan unit on a purpose made PCB, all such components are pre-wired and factory fitted by the manufacturer:

- Independent control of background supply and extract flow rates.
- Independent control of boost speed supply and extract flow rates.
- Integral heat exchanger frost protection.
- Fan failure indication.
- Integral S/L terminal for boost from remote switch, e.g. light switch.
- Additional S/L terminal for 100% boost speed from remote switch, e.g. plate switch.
- Discreet daily run monitor.
- Remote fail indicator (part number MRXBOX95-RFI).
- Indication and controls – The unit shall have clear LED visual indication for maintenance, servicing and operation mode, i.e. HX bypass, frost protection.

MRXBOX-VSC (VISUAL SYSTEM CONTROLLER)

The MRXBOX-VSC is compatible with the Nuaire MRXBOXAB-ECO2 heat recovery units and can be purchased separately. The controller comes complete with commissioning and end user functions.

The display will be a 3.5" LCD display and will remain on standby until such time the screen is touched.

The initial display will show the MVHR system status as listed below:

- Current fan speed.
- Current indoor/outside temperature.
- Indicate when the Summer bypass is activated.
- Indicate when frost protection is activated.
- Indicate when the filters require cleaning/changing.

The unit shall come with a 5 year warranty which starts from the day of delivery, and includes parts and labour for the first year and parts only for the remaining 4 years.

MRXBOXAB-ECO3 MRXBOX-ECO3 and Opposite Handed versions

ACHIEVES
100%
DUTY IN BYPASS
MODE

The MRXBOXAB-ECO3 has been designed with automatic 100% bypass as listed on the SAP Product Characteristics Database (PCDB).

Due to its intelligent and smart design, there will be no reduction in airflow when operating in bypass mode resulting in enhanced performance.

Both the MRXBOXAB-ECO3 and the MRXBOX-ECO3 are designed to provide optimised balanced (supply and extract) mechanical ventilation with heat recovery and both listed on the PCDB.

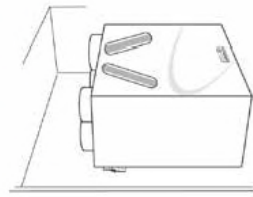
The units operate by continuously extracting moisture-laden air from 'wet' rooms within the property and at the same time drawing in fresh supply air from outside. The heat from the extracted stale air is recovered via a heat exchanger inside the heat recovery unit which becomes tempered then filtered before supplying into the habitable rooms creating comfortable and well ventilated homes.

The heat exchanger block within these units can recover up to 95% of the normally wasted heat. The two independent fans have full speed control for background and boost ventilation rates.

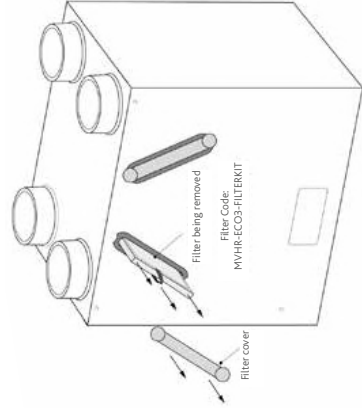
The MRXBOXAB-ECO3 has a summer bypass function. This feature activates automatically and attempts to maintain the home at a comfortable temperature. For example, if the outside temperature is warmer than the inside, the unit will continue to draw air through the heat exchanger. If the house is warmer than outside, the unit will bypass the heat exchanger and draw air in directly from outside.

Typical Installation

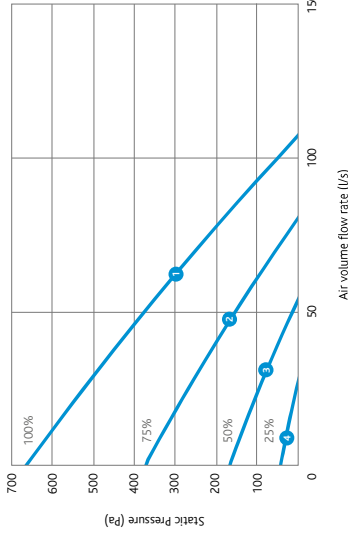
INSTALLATION FEATURES



Typical cupboard installation of MRXBOXAB-ECO3



Performance – MRXBOXAB-ECO3



CODE DESCRIPTION

MRXBOXAB-ECO3

Wall mounted unit with 100% bypass and integral humidistat.

MRXBOX-ECO3

Wall mounted unit.

MRXBOXAB-ECO3-OH

Opposite handed configuration wall mounted unit with 100% bypass and integral humidistat.

MRXBOX-ECO3-OH

Opposite handed configuration wall mounted unit.

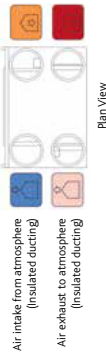
Electrical & Sound

	Maximum power consumption		Sound Power Levels dB re 1pW (frequency Hz)								dBa @3m
Curve	(Watts)		63	125	250	500	1k	2k	4k	8k	
1	156	Open inlet	48	57	60	53	49	44	33	24	
		Open outlet	57	67	63	64	61	61	52	45	
		Breakout	65	59	58	57	50	46	36	26	40
2	67	Open inlet	43	52	56	48	46	40	30	18	
		Open outlet	54	62	59	62	58	58	48	40	
		Breakout	54	55	52	51	44	42	28	<16	34
3	20	Open inlet	38	44	47	39	36	29	16	<16	
		Open outlet	46	53	49	52	46	44	33	21	
		Breakout	47	46	44	42	34	29	16	<16	25
4	7	Open inlet	33	27	26	16	<16	<16	<16	<16	
		Open outlet	39	34	31	32	22	<16	<16	<16	
		Breakout	41	29	27	20	<16	<16	<16	<16	<16

The maximum power consumption shown above (Watts) is consumed on units running continuously, not taking into account any heat recovery saving and based on SAP Product Characteristic Database (PCDB) testing. The breakout case-radiated dBA values are given for Hemispherical free field radiation at 3m - to obtain the Spherical radiated data, subtract 3 dBA.

Please note: Sound data is provided at a particular duty point for 25%, 50%, 75% and 100%. For accurate sound data at a specific speed duty, please use Nuair's fan selector or call the office on 029 2085 8500.

Standard Handling



Opposite Handling



SAP 2009 Test Results ▼

Product Code	MRXBOXAB-ECO3			MRXBOX-ECO3		
Application	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant
Kitchen + 1 Wet Room	0.51	90%	Yes	0.50	91%	Yes
Kitchen + 2 Wet Room	0.46	90%	Yes	0.44	91%	Yes
Kitchen + 3 Wet Room	0.48	90%	Yes	0.46	91%	Yes
Kitchen + 4 Wet Room	0.55	89%	Yes	0.52	90%	Yes
Kitchen + 5 Wet Room	0.62	89%	Yes	0.60	90%	Yes
Kitchen + 6 Wet Room	0.73	88%	Yes	0.70	89%	Yes
Kitchen + 7 Wet Room	0.87	88%	Yes	0.82	89%	Yes

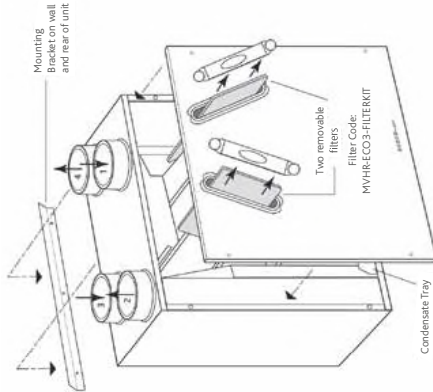
SAP 2012 Test Results ▼

Product Code	MRXBOXAB-ECO3			MRXBOX-ECO3		
Application	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant
Kitchen + 1 Wet Room	0.50	90%	Yes	0.47	91%	Yes
Kitchen + 2 Wet Room	0.53	90%	Yes	0.50	91%	Yes
Kitchen + 3 Wet Room	0.60	89%	Yes	0.58	90%	Yes
Kitchen + 4 Wet Room	0.75	88%	Yes	0.71	89%	Yes
Kitchen + 5 Wet Room	0.92	88%	Yes	0.86	89%	Yes
Kitchen + 6 Wet Room	1.10	87%	Yes	1.08	88%	Yes
Kitchen + 7 Wet Room	1.36	87%	Yes	1.33	88%	Yes

General Arrangement ▼

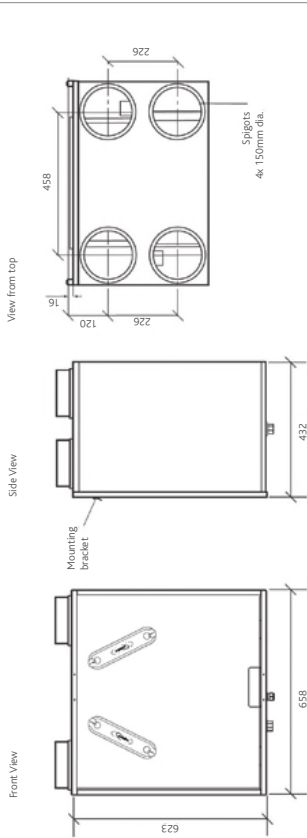
SPIGOT LOCATION & DUCTING REFERENCES

- Spigot 1. 150mm dia. = Extract air from dwelling.
- Spigot 2. 150mm dia. = Discharge air to outside.
- Spigot 3. 150mm dia. = Intake air from outside.
- Spigot 4. 150mm dia. = Supply air to property



Technical - MRXBOX(AB)-ECO3 ▼

DIMENSIONS (mm)
Weight - 24kg



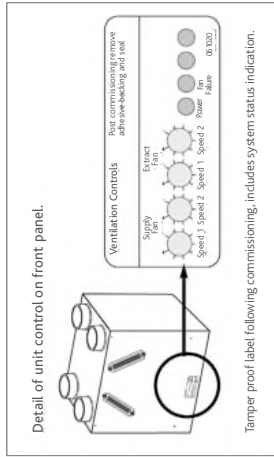
Electrical Details ▼

Please note: The electrical connection of the unit must be carried out by a qualified electrician.

The unit is supplied with a flexible cord for connection to the mains supply.

NOTE: This unit must be earthed.

The mains power supply cable should be connected to a fixed wiring installation in accordance with current IEE wiring regulations.



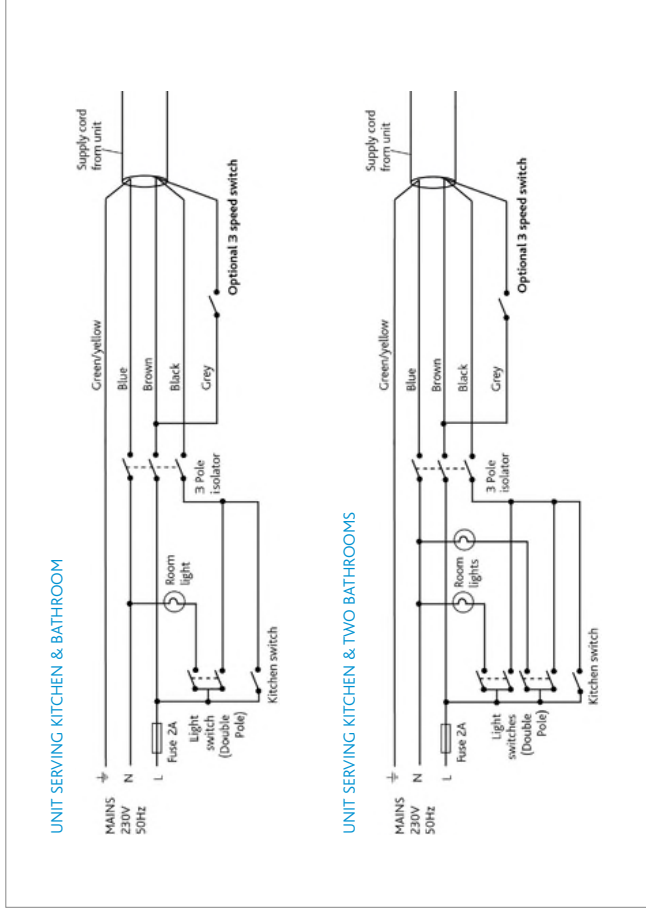
Tamper proof label following commissioning, includes system status indication.

Electrical Details: MRXBOX(AB)-ECO3

Voltage: 230V 1ph 50Hz

Consumption: 1.2Amp

Wiring – MRXBOX(AB)-ECO3 ▼



Optional Sensors and Detectors ▼

Customise MRXBOX(AB)-ECO3 for enhanced performance. All supplied with pre-plugged 10m data cable and incorporates status LED.

MRXBOX95-PIR (Passive Infrared)

A low voltage sensor, detects movement and activates system. Incorporates overrun timer and timer adjustments.

MRXBOX95-HUM (Relative Humidity)

A low voltage sensor, detects movement and activates system when the RH level is above set point. Incorporates overrun timer and RH setpoint level adjustment.

MRXBOX95-RFI (Remote Fail Indicator)

If fan failure occurs, the audio visual indicator will flash a warning.



Consultants Specification

SPECIFICATION

The unit shall be fully insulated providing excellent thermal and acoustic characteristics and shall be complete with a multi-plate, counter-flow, high-efficiency heat exchanger block, with a thermal efficiency of up to 95%. The heat exchanger shall be protected by G3 grade filters on fresh air inlet and system extract. The heat exchanger and filters shall be accessible via the front access panel, enabling quick and easy maintenance.

The unit shall have low energy, high-efficiency EC fan/motor assemblies with sealed for life bearings, the impellers shall be backward curved centrifugal type. The motors shall be suitable for an ambient temperature of 40°C.

The unit shall be supplied complete with an insulated condensate drip tray and 21.5mm drain connection.

The unit shall be suitable for 150mm circular ducting.

Note: The unit is also available in opposite handed format, refer to spigot configuration for set up.

The breakout noise level and power requirements shall be as detailed by the unit manufacturer and in accordance with the ventilation equipment schedule.

Units shall be MRXBOX-ECO3 or MRXBOXAB-ECO3 as manufactured by Nuaire and shall be listed on the SAP PCDB. MRXBOX-ECO3-OH and MRXBOXAB-ECO3-OH are opposite handed assemblies compliant as per standard handed versions listed in SAP PCDB.

OPERATION

The supply and extract system shall be positioned as indicated on the drawings and shall be in accordance with the particular fan schedule in the specification.

The combined supply and extract with heat recovery unit shall supply filtered fresh air to each of the habitable rooms and moisture-laden air shall be extracted from all wet areas, e.g. bathroom, en suite, w.c., kitchen, utility rooms etc. The supply air shall be pre-heated by the warm extract air via the integrated counter-flow heat exchanger element. The extracted air shall also be filtered before it reaches the heat exchanger block.

The ventilation unit shall vary its speed and therefore the ventilation rate, as it receives signals from one of the following:

- Switched live signal from light/remote switches.
- When signals are received, the fan shall alter its speed to adjustable, normal and boost rates.

The unit shall have the facility to commission the supply and extract fans independently on minimum speed (continuous background ventilation) and boost speed via inbuilt minimum and maximum speed adjustment. The fans shall have infinitely variable speed control.

INTEGRAL AUTOMATIC HX BYPASS WITH NO REDUCTION IN AIRFLOW (MRXBOXAB-ECO3 & MRXBOXAB-ECO3-OH)

The bypass damper shall open automatically via a wax actuator, allowing the air to bypass the heat exchanger to deliver fresh filtered air during the warmer months.

The automatic bypass diverts 100% airflow around the heat exchanger with no reduction in airflow as independently tested by the BRE.

INTEGRAL HUMIDITY SENSOR (MRXBOXAB-ECO3 & MRXBOXAB-ECO3-OH only)

The integral humidity sensor incorporated within the extract fan chamber will automatically boost both the extract and supply fan, to the commissioned boost speed, when the humidity level exceeds that set by the front panel mounted adjustment potentiometer.

CONTROL OPTIONS

All versions shall have the following functions integrally mounted within the fan unit on a purpose made PCB, all such components are pre-wired and factory fitted by the manufacturer.

- Independent control of background supply and extract flow rates.
- Independent control of boost speed supply and extract flow rates.
- Integral heat exchanger frost protection.
- Fan failure indication.
- Integral S/L terminal for boost from remote switch, e.g. light switch.
- Additional S/L terminal for 100% boost speed from remote switch, e.g. plate switch.
- Discreet daily run monitor.
- Indication and controls – the unit shall have clear LED visual indication for maintenance, servicing and operation mode, i.e. HX bypass, frost protection.

MRXBOX-VSC (VISUAL SYSTEM CONTROLLER)

The MRXBOX-VSC is compatible with the Nuaire MRXBOX(AB)-ECO3 heat recovery units and can be purchased separately. The controller comes complete with commissioning and end user functions.

The display will be a 3.5" LCD display and will remain on standby until such time the screen is touched.

The initial display will show the MVHR system status as listed below:

- Current fan speed.
- Current indoor/outside temperature.
- Indicate when the Summer bypass is activated.
- Indicate when frost protection is activated.
- Indicate when the filters require cleaning/changing.

The unit shall come with a 5 year warranty which starts from the day of delivery, and includes parts and labour for the first year and parts only for the remaining 4 years.

MRXBOXAB-ECO4

and Opposite Handed version

ACHIEVES
100%
DUTY IN BYPASS
MODE

The MRXBOXAB-ECO4 has been designed with automatic 100% bypass as listed on the SAP Product Characteristics Database (PCDB).

Due to its intelligent and smart design, there will be no reduction in airflow when operating in bypass mode resulting in enhanced performance.

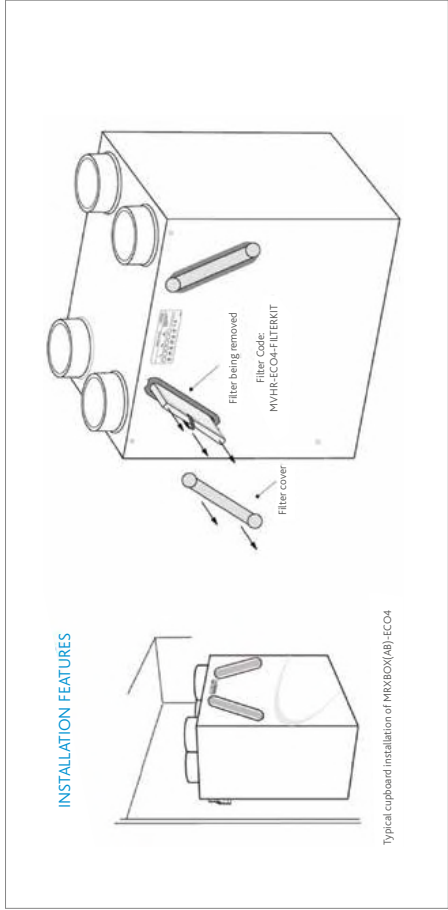
The MRXBOXAB-ECO4 is designed to provide optimised balanced (supply and extract) mechanical ventilation with heat recovery and listed on the PCDB.

The unit operates by continuously extracting moisture-laden air from 'wet' rooms within the property and at the same time drawing in fresh supply air from outside. The heat from the extracted stale air is recovered via a heat exchanger inside the heat recovery unit which becomes tempered then filtered before supplying into the habitable rooms creating comfortable and well ventilated homes.

The heat exchanger block within the units can recover up to 95% of the normally wasted heat. The two independent fans have full speed control for background and boost ventilation rates.

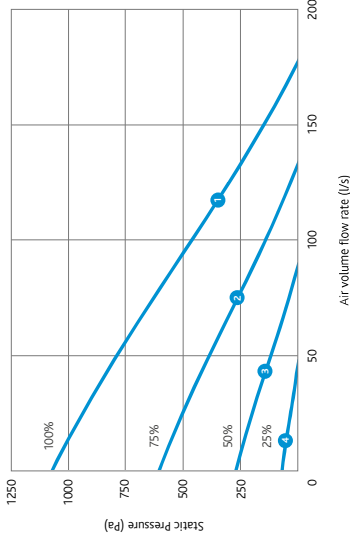
The MRXBOXAB-ECO4 has a summer bypass function. This feature activates automatically and attempts to maintain the home at a comfortable temperature. For example, if the outside temperature is warmer than the inside, the unit will continue to draw air through the heat exchanger. If the house is warmer than outside, the unit will bypass the heat exchanger and draw air in directly from outside.

Typical Installation



Typical cupboard installation of MRXBOXAB-ECO4

Performance – MRXBOXAB-ECO4



CODE DESCRIPTION

MRXBOXAB-ECO4

Wall mounted unit with 100% bypass and integral humidistat.

MRXBOXAB-ECO4-OH

Opposite handed configuration wall mounted unit with 100% bypass and integral humidistat.

Electrical & Sound

	Maximum power consumption	Sound Power Levels dB re 1pW (Frequency Hz)										dBA @3m
Curve	(Watts)	63	125	250	500	1k	2k	4k	8k			
1	350	Open inlet	61	56	56	63	53	48	40	33		
		Open outlet	64	65	66	77	66	64	58	55		
		Breakout	66	63	61	62	49	41	34	26	43	
2	152	Open inlet	53	54	54	59	49	43	34	27		
		Open outlet	60	64	62	73	61	58	52	48		
		Breakout	63	61	58	62	47	38	32	22	42	
3	41	Open inlet	44	48	45	43	37	33	19	<16		
		Open outlet	51	58	58	55	49	47	38	31		
		Breakout	50	55	54	44	36	29	17	<16	30	
4	10	Open inlet	38	34	28	22	18	<16	<16	<16		
		Open outlet	44	42	34	32	25	<16	<16	<16		
		Breakout	39	40	34	22	19	<16	<16	<16	<16	

The maximum power consumption shown above (Watts) is consumed on units running continuously, not taking into account any heat recovery saving and based on SAP Product Characteristics Database (PCDB) testing. The breakout case-radiated dBA values are given for Hemispherical free field radiation at 3m - to obtain the Spherical radiated data, subtract 3 dBA.

Please note: Sound data is provided at a particular duty point for 25%, 50%, 75% and 100%. For accurate sound data at a specific speed duty, please use Nuair's fan selector or call the office on 029 2085 8500.

Standard Handling



Opposite Handling



SAP 2009 Test Results

MRXBOXAB-ECO4			
Product Code	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant
Kitchen + 1 Wet Room	0.62	94%	Yes
Kitchen + 2 Wet Room	0.56	94%	Yes
Kitchen + 3 Wet Room	0.56	93%	Yes
Kitchen + 4 Wet Room	0.61	93%	Yes
Kitchen + 5 Wet Room	0.67	93%	Yes
Kitchen + 6 Wet Room	0.75	92%	Yes
Kitchen + 7 Wet Room	0.90	91%	Yes

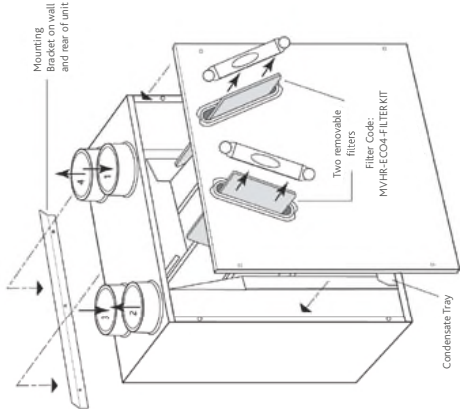
SAP 2012 Test Results

MRXBOXAB-ECO4			
Product Code	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant
Kitchen + 1 Wet Room	0.62	94%	Yes
Kitchen + 2 Wet Room	0.62	93%	Yes
Kitchen + 3 Wet Room	0.66	93%	Yes
Kitchen + 4 Wet Room	0.79	92%	Yes
Kitchen + 5 Wet Room	0.94	91%	Yes
Kitchen + 6 Wet Room	1.15	91%	Yes
Kitchen + 7 Wet Room	1.41	91%	Yes

General Arrangement

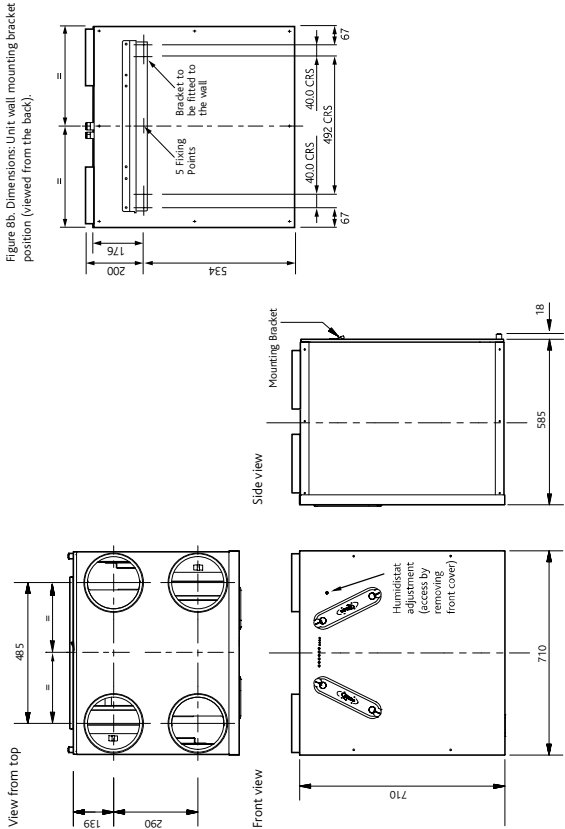
SPIGOT LOCATION & DUCTING REFERENCES

- Spigot 1, 200mm dia = Extract air from dwelling.
- Spigot 2, 200mm dia = Discharge air to outside.
- Spigot 3, 200mm dia = Intake air from outside.
- Spigot 4, 200mm dia = Supply air to property



Technical - MRXBOXAB-ECO4

DIMENSIONS (mm)



Electrical Details

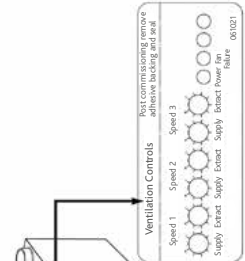
Please note: The electrical connection of the unit must be carried out by a qualified electrician.

The unit is supplied with a flexible cord for connection to the mains supply.

The mains power supply cable should be connected to a fixed wiring installation in accordance with current IEE wiring regulations.

Electrical Details: MRXBOXAB-ECO4		
Voltage:	230V 1ph 50Hz	
Consumption:	2.4 Amp	

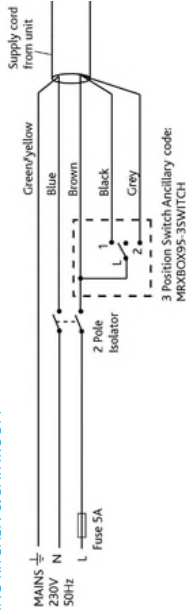
Detail of unit control on front panel.



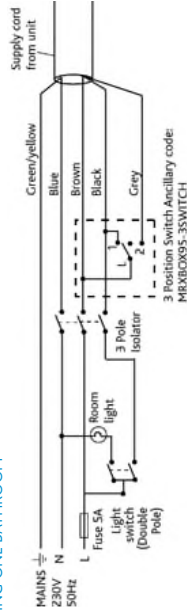
Tamper proof label following commissioning, includes system status indication.

Wiring

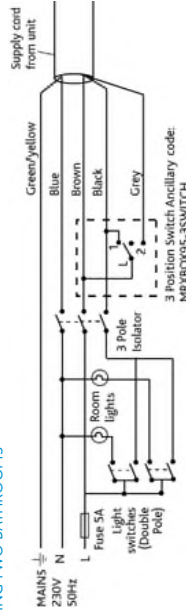
UNIT SERVING KITCHEN & BATHROOM



UNIT SERVING ONE BATHROOM



UNIT SERVING TWO BATHROOMS



Optional Sensors and Detectors

Customise MRXBOXAB-ECO4 for enhanced performance. All supplied with pre-plugged 10m data cable and incorporates status LED.

MRXBOX95-PIR (Passive Infrared)

A low voltage sensor, detects movement and activates system. Incorporates overrun timer and timer adjustments.

MRXBOX95-HUM (Relative Humidity)

A low voltage sensor, activates the system when the RH level is above set point. Incorporates overrun timer and RH setpoint level adjustment.

MRXBOX95-RFI (Remote Fail Indicator)

If fan failure occurs, the audio visual indicator will flash a warning.

Consultants Specification

SPECIFICATION

The unit shall be fully insulated providing excellent thermal and acoustic characteristics and shall be complete with a multi-plate, counter-flow, high-efficiency heat exchanger block with a efficiency of up to 95%. The heat exchanger shall be protected by G3 grade filters on fresh air inlet and system extract.

The heat exchanger and filters shall be accessible via the front access panel, enabling quick and easy maintenance.

The unit shall have low energy, high-efficiency EC fan/motor assemblies with sealed for life bearings, the impellers shall be backward curved centrifugal type.

The motors shall be suitable for an ambient temperature of 40°C.

The unit shall be supplied complete with a condensate drip tray and 32mm drain connection.

The unit shall be suitable for 200mm diameter circular ducting.

Note: The unit is also available in opposite handed format, refer to spigot configuration for set up.

The breakout noise level and power requirements shall be as detailed by the unit manufacturer and in accordance with the ventilation equipment schedule.

The unit shall be MRXBOXAB-ECO4 as manufactured by Nuaire and shall be listed on the SAP PCDB.

MRXBOXAB-ECO4-OH is an opposite handed assembly compliant as per standard handed versions listed in SAP PCDB.

OPERATION

The supply and extract ventilation unit shall be positioned as indicated on the drawings and shall be in accordance with the particular fan schedule in the specification.

The combined supply and extract with heat recovery unit shall supply filtered fresh air to each of the habitable rooms and moisture-laden air shall be extracted from the wet areas e.g. bathroom, en-suite, w.c, kitchen, utility rooms, etc. The supply air shall be pre-heated by the warm extract air via the integrated counter-flow heat exchanger element.

The extracted air shall also be filtered before it reaches the heat exchanger block. The ventilation unit shall vary its speed and therefore the ventilation rate, as it receives signals from one of the following:

- Switched live signal from light/remote switches.

When signals are received, the fan shall alter its speed to adjustable, normal and boost rates.

The unit shall have the facility to commission the supply and extract fans independently on minimum speed (continuous background ventilation) and boost speed via inbuilt minimum and maximum speed adjustment. The fans shall have infinitely variable speed control.

INTEGRAL AUTOMATIC HX BYPASS WITH NO REDUCTION IN AIRFLOW

The bypass damper shall open automatically via a wax actuator allowing the air to bypass the heat exchanger to deliver fresh filtered air during the warmer months.

Under normal operation, the automatic bypass diverts 100% airflow around the heat exchanger with no reduction in airflow, as independently tested by the BRE.

INTEGRAL HUMIDITY SENSOR

The integral humidity sensor incorporated within the extract fan chamber will automatically boost both the extract and supply fan, to the commissioned boost speed, when the humidity level exceeds that set by the front panel mounted adjustment potentiometer.

OPTIONAL REMOTE SWITCH (MRXBOX95-3SWITCH)

The unit shall have the facility to wire a three position remote switch to a suitable location within the property. The switch shall have 3 settings: trickle, boost and Summertime boost facility. The remote switch will act as the master switch and will override all other switches.

CONTROL OPTIONS

All versions shall have the following functions integrally mounted within the fan unit on a purpose made PCB, all such components are prewired and factory fitted by the manufacturer:

- Independent control of background supply and extract flow rates.
- Independent control of boost speed supply and extract flow rates.
- Integral fan failure indication.
- Integral S/L terminal for boost to commissioned level, from remote switch, e.g. light switch.
- Integral S/L terminal for third speed (purge), boost speed, from remote switch e.g. plate switch.
- Integral heat exchanger frost protection.
- Discreet daily run monitor.
- Indication and controls - The unit shall have clear LED visual indication for maintenance, servicing and operation mode i.e. HX bypass, frost protection.

The unit shall be offered with a 5 year warranty which starts from the day of delivery, and includes parts and labour for the first year and parts only for the remaining 4 years.

MRXBOXAB-ECO-LP2

and Opposite Handed version

100%
BYPASS

MRXBOXAB-ECO-LP2 and MRXBOXAB-ECO-LP2-OH are specially designed for apartment applications where space is at a premium.

The new MRXBOXAB-ECO-LP2 offers the lowest specific fan power of any low-profile, void-mounted MVHR system and is specifically designed to fit easily into apartments with ceiling void restrictions where space is at a premium.

The MRXBOXAB-ECO-LP2 has been designed with automatic 100% bypass as listed on the SAP Product Characteristics Database (PCDB).

The MRXBOXAB-ECO-LP2 is designed to provide optimised balanced (supply and extract) mechanical ventilation with heat recovery and listed on the PCDB.

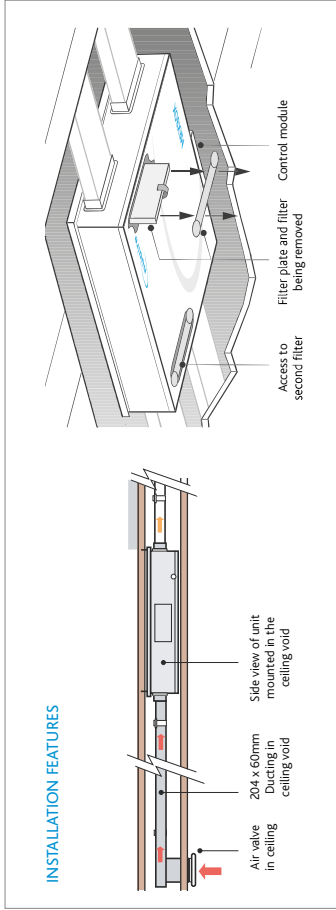
The unit operates by continuously extracting moisture laden air from 'wet' rooms within the property and at the same time drawing in fresh supply air from outside. The heat from the extracted stale air is recovered via a heat exchanger inside the heat recovery unit, which becomes tempered then filtered before supplying into the habitable rooms creating comfortable and well ventilated homes.

The two independent fans have full speed control for background and boost ventilation rates.

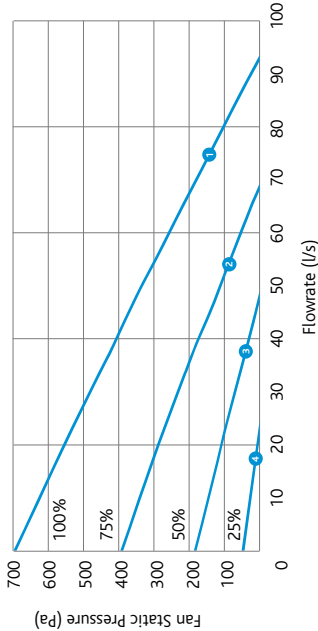
The MRXBOXAB-ECO-LP2 has a summer bypass function. This feature activates automatically and attempts to maintain the home at a comfortable temperature. For example, if the outside temperature is warmer than the inside, the unit will continue to draw air through the heat exchanger. If the house is warmer than outside, the unit will bypass the heat exchanger and draw air in directly from outside.



Typical Installation



Performance – MRXBOXAB-ECO-LP2



CODE DESCRIPTION

MRXBOXAB-ECO-LP2

Low profile multi-room supply and extract heat recovery with automatic Summer Bypass.

MRXBOXAB-ECO-LP2-OH

Low profile multi-room supply and extract heat recovery with automatic Summer Bypass with reverse handing.

Electrical & Sound

Maximum power consumption		Sound Power Levels dB re 1pW (Frequency Hz)										dBa @3m
Curve	(Watts)	63	125	250	500	1k	2k	4k	8k			
1	163	Open inlet	51	45	50	48	40	42	29	19		
		Open outlet	54	49	59	64	61	60	51	43		
		Breakout	58	60	61	58	48	41	33	25	40	
2	69	Open inlet	51	43	46	44	36	36	22	<16		
		Open outlet	51	45	54	59	55	54	44	34		
		Breakout	54	57	56	52	41	34	25	18	34	
3	22	Open inlet	45	37	34	32	24	23	<16	<16		
		Open outlet	44	37	43	46	43	41	29	19		
		Breakout	47	50	44	40	30	22	<16	<16	23	
4	7	Open inlet	38	31	24	22	<16	<16	<16	<16		
		Open outlet	37	30	33	36	33	31	19	<16		
		Breakout	40	43	34	30	20	<16	<16	<16	<16	

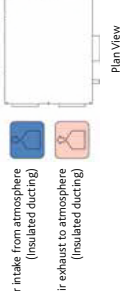
The maximum power consumption shown above (Watts) is consumed on units running continuously, not taking into account any heat recovery saving based on SAP Product Characteristics Database (PCDB) testing. The breakout case-radiated dBA values are given for Hemispherical free field radiation at 3m - to obtain the Spherical radiated data, subtract 3 dBA.

Please note: Sound data is provided at a particular duty point for 25%, 50%, 75% and 100%. For accurate sound data at a specific speed duty, please use Nuaire's fan selector or call the office on 029 2085 8500.

Standard Handing



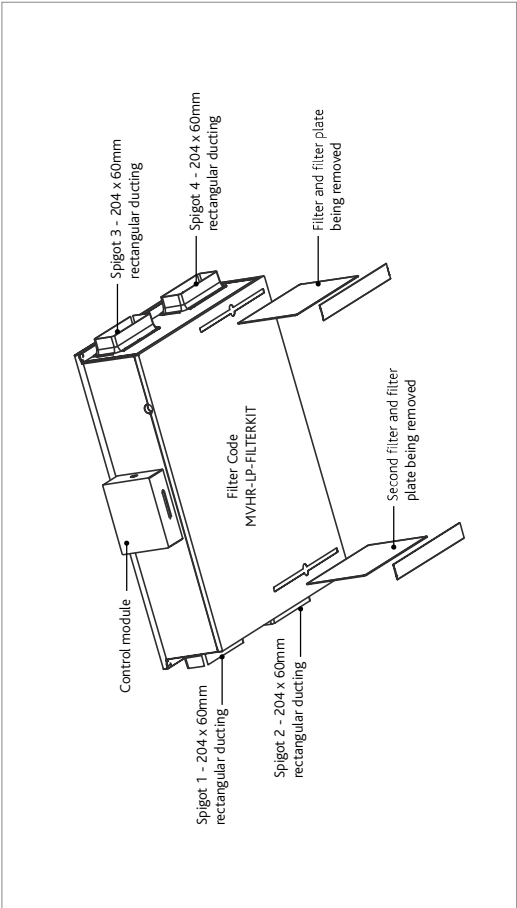
Opposite Handing



SAP 2012 Test Results ▼

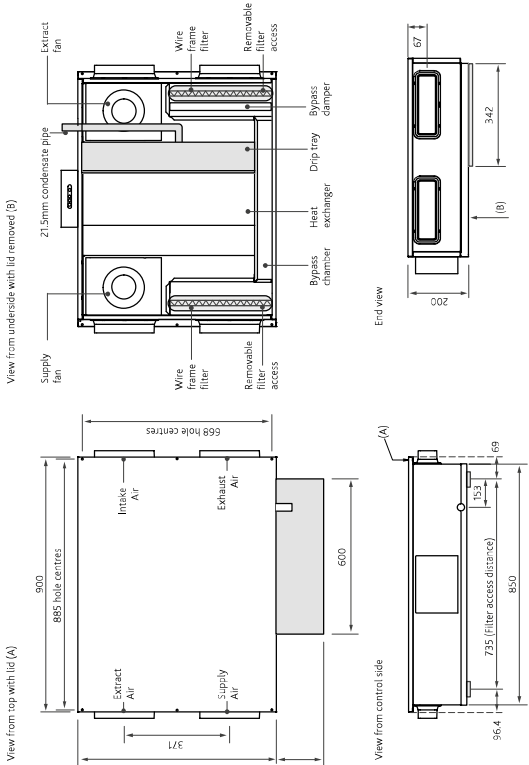
MRXBOXAB-ECO-LP2			
Product Code	Exhaust Terminal Configuration	Specific Fan Power (W/l/s)	Energy Saving Trust Best Practice Compliant
	Kitchen + 1 Wet Room	0.48	Yes
	Kitchen + 2 Wet Room	0.61	Yes
	Kitchen + 3 Wet Room	0.77	Yes
	Kitchen + 4 Wet Room	1.01	Yes
	Kitchen + 5 Wet Room	1.26	Yes

General Arrangement ▼



Technical – MRXBOXAB-ECO-LP2 ▼

DIMENSIONS (mm)
Weight - 37kg



Electrical Details ▼

Please note: The electrical connection of the unit must be carried out by a qualified electrician.

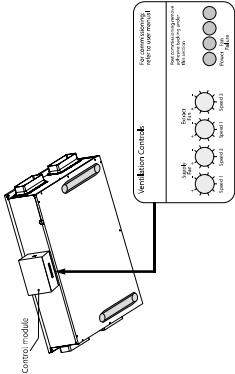
The unit is supplied with a flexible cord for connection to the mains supply.

NOTE: This unit must be earthed.

The three core cable from the mains power supply should be connected to a fixed wiring installation in accordance with current IEE wiring regulations.

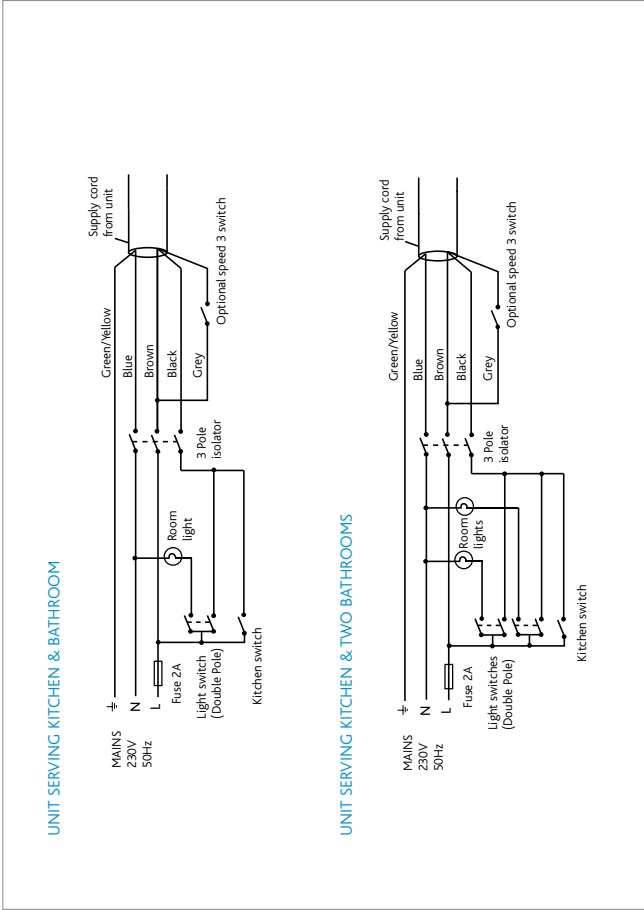
Electrical Details: MRXBOXAB-ECO-LP2
Voltage: 230V 1ph 50Hz
Consumption: 1.2 Amp

Detail of unit control on control panel.



Tamper proof label following commissioning, includes system status indication.

Wiring – MRXBOXAB-ECO-LP2



Optional Sensors and Detectors

- Customise MRXBOXAB-ECO-LP2 for enhanced performance.** All supplied with pre-plugged 10m data cable and incorporates status LED.
- MRXBOX95-PIR (Passive Infrared)**
A low voltage sensor, detects movement and activates system. Incorporates overrun timer and timer adjustments.
- MRXBOX95-HUM (Relative Humidity)**
A low RH sensor, activates the system when the RH level is above set point. Incorporates overrun timer and RH setpoint level adjustment.
- MRXBOX95-RFI (Remote Fail Indicator)**
If fan failure occurs, the audio visual indicator will flash a warning.



Consultants Specification

SPECIFICATION

The unit shall be manufactured from galvanised sheet steel with a white, pre-painted removable access panel. The unit shall be fully insulated providing excellent thermal and acoustic characteristics and shall be complete with a multi-plate, aluminium, counter-flow, high-efficiency heat exchanger block, with a thermal efficiency of up to 80%. The heat exchanger shall be protected by G3 grade filters on fresh air inlet and system extract. The heat exchanger and filters shall be accessible via the underside access panels, enabling quick and easy maintenance.

The unit shall have a maximum depth of 200mm to fit within ceiling void restrictions. The unit shall have low energy, high-efficiency EC fan/motor assemblies with sealed for life bearings, the impellers shall be backward curved centrifugal type. The motors shall be suitable for an ambient temperature of 40°C.

Motor assemblies shall be removable from the underside of the unit and will not require the unit to be removed from situ. The unit shall be supplied complete with a condensate drip tray and 21.5mm drain connection.

The unit shall be suitable for 204x60mm rectangular ducting. Note: The unit is also available in opposite handed format, refer to spigot configuration for set up.

The breakout noise level and power requirements shall be as detailed by the unit manufacturer and in accordance with the ventilation equipment schedule. Units shall be MRXBOXAB-ECO-LP2 and MRXBOXAB-ECO-LP2-OH as manufactured by Nuaire and shall be listed on the PCDB database.

OPERATION
The supply and extract ventilation unit shall be positioned as indicated on the drawings and shall be in accordance with the particular fan schedule in the specification.

The combined supply and extract with heat recovery unit shall supply filtered fresh air to each of the habitable rooms and moisture-laden air shall be extracted from the wet areas e.g. bathroom, en-suite, w.c. kitchen, utility rooms, etc. The supply air shall be pre-heated by the warm extract air via the integrated counter-flow heat exchanger element.

The extracted air shall also be filtered before it reaches the heat exchanger block. The ventilation unit shall vary its speed and therefore the ventilation rate, as it receives signals from one of the following:

- Switched live signal from light/remote switches. When signals are received, the fan shall alter its speed to adjustable, normal and boost rates.

The unit shall have the facility to commission the supply and extract fans independently on minimum speed (continuous background ventilation) and boost speed via inbuilt minimum and maximum speed adjustment. The fans shall have infinitely variable speed control.

INTEGRAL AUTOMATIC SUMMER BYPASS

The bypass damper shall open automatically via a wax actuator, allowing the air to bypass the heat exchanger to deliver fresh filtered air during the warmer months.

CONTROL OPTIONS

All versions shall have the following functions integrally mounted within the fan unit on a purpose made PCB, all such components are pre-wired and factory fitted by the manufacturer:

- Independent control of background supply and extract flow rates.
- Independent control of boost speed supply and extract flow rates.
- Integral heat exchanger frost protection.
- Fan failure indication.
- Integral S/L terminal for boost from remote switch, e.g. light switch.
- Additional S/L terminal for 100% boost speed from remote switch, e.g. plate switch.
- Discreet daily run monitor.
- Remote fail indicator (part number MRXBOX95-RFI).
- Indication and controls – The unit shall have clear LED visual indication for maintenance, servicing and operation mode, i.e. summer bypass, frost protection.

MRXBOX-VSC (VISUAL SYSTEM CONTROLLER)

The MRXBOX-VSC is compatible with the Nuaire MRXBOXAB-ECO-LP2 heat recovery units and can be purchased separately. The controller comes complete with commissioning and end user functions.

The display will be a 3.5" LCD display and will remain on standby until such time as the screen is touched.

The initial display will show the MVHR system status as listed below:

- Current fan speed.
- Current indoor/outside temperature.
- Indicate when the summer bypass is activated.
- Indicate when frost protection is activated.
- Indicate when the filters require cleaning/changing.

REMOTE COMMISSIONING

(MRXBOXAB-ECO-LP2-C & MRXBOXAB-ECO-LP2OH-C units only)
These units shall have a remote control PCB fitted with a 1m flexible conduit providing improved access for commissioning.

The unit shall be offered with a 5 year warranty which starts from the day of delivery, and includes parts and labour for the first year and parts only for the remaining 4 years.

Q-Aire

Quick
Quiet
Quality

As Mechanical Ventilation Heat Recovery fast becomes the most popular form of ventilation, Nuaire continue to lead the way in innovation and market leadership.

The introduction of the Q-Aire range means Nuaire can offer an entire MVHR solution for new build properties, with every aspect of the system taken care of. We recognise that customers need products quickly, systems that work quietly and confidence in their high quality – something which comes as standard at Nuaire.

The Q-Aire range includes unique acoustic solutions to meet in room noise levels of NR25 with projects demanding high air volumes. This includes an acoustic enclosure for an MVHR unit only and a unique all-in-one acoustic enclosure surround which also incorporates a built-in silencer.

To compliment these units, choose from the only supply valve on the market which offers both a built in humidistat, G2 filter and is lockable to meet the NHBC guidelines. These create great benefits for everyone involved in a new build project: Quiet solutions for the consultants, Quick delivery, installation and commissioning for the contractors providing Quality products for the end client.



Removes up to
99.5%
of Nitrogen
Dioxide NO₂

The Q-Aire range also includes the IAQ range, representing the latest technology in carbon filtration to tackle rising air pollution.

With the increasing focus on Indoor Air Quality, particularly in urban areas where high levels of NO₂ are being measured, higher levels of filtration are required to meet the World Health Organisation (WHO) guidelines.

Nuaire's IAQBOX range incorporates a NO₂ filter cartridge up to 99.5% efficient and offers optional PM2.5 & PM10 filters. The range consists of two sizes to allow large volumes of air to pass through without causing a rise in pressure on the MVHR system.

Our very latest innovation is a unique NO₂ cartridge that sits within our newly designed supply air valve, capable of supplying and filtering airflow into the property.

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LOWLAND PLANNING ASSOCIATES Ltd.; DEVELOPMENT and ENVIRONMENTAL SERVICES Ltd.

with STUART KING ARCHITECTURE and DESIGN Ltd. For FREEWHEELIN' Ltd.

2nd SUPPLEMENTARY STATEMENT in RESPONSE to PLANNING POLICY COMMENTS by PERTH AND KINROSS COUNCIL.

APPLICATION NO. 20/01197/FLL

THE ERECTION of 4 HOUSES at WESTER BALHOMIE, CARGILL.

BACKGROUND

The current planning application for the erection of 4 houses at Wester Balhomie replaces a previous application of 2019 which was withdrawn. However, it is also important to recognise that Katrina Walker of the Perth and Kinross Council (PKC) Planning Policy team has very recently redrafted the Supplementary Guidance (SG) covering Houses in the Countryside. This is a very clear and concise document (adopted March 2020) and it is extremely helpful to all applicants who endeavour to develop in the rural areas of Perth and Kinross. The planning statement which accompanied the 2019 application is still relevant and it also forms part of this application. The 2 documents will, I trust, dovetail, particularly in terms of the site and the area description and the sustainable house designs. We have had no negative comments on those matters and we can leave those unchanged. However, we will discuss local impact, sustainability, biodiversity, siting and economic benefits later in this paper. The dominant issue of this paper is brownfield land and the post-dereliction contamination across the site.

For the current application we have seconded the assistance of Daniel Henderson of Development and Environmental Services, who has 45 years' experience as a chartered brownfield and contaminated land professional, and his expert opinion on the condition of the land that forms the application site is very much to the fore here.

THE CURRENT LDP POLICY and SUPPLEMENTARY GUIDANCE ANALYSIS

POLICY 19 - PERTH and KINROSS LOCAL DEVELOPMENT PLAN (PKLDP)

Policy 19 helpfully subdivides the circumstances in which development in areas defined as rural is acceptable. There are 6 categories, however only one, part 6, is relevant to this proposal. This covers Development on Rural Brownfield Land.

THE SUPPLEMENTARY GUIDANCE-FINE TUNING OF POLICY 19

The SG gives a very specific description of what constitutes rural brownfield land. As stated above, the new SG is clear on what can be termed brownfield land in the countryside.

To quote “ Derelict land which was at one time occupied by buildings or structures but these have now been removed, or land directly linked to former buildings or structures which have been so damaged by a former use that it cannot be left to naturalise or be reused for another purpose without first being improved.”

The requirements are stated as “sites which have either been completely cleared of all buildings and structures. or where some foundations or substructures remain.” The above in our professional opinion describes perfectly the Wester Balhomie site. The proposal for 4 houses is within the upper limit of 5 units, forming a small cluster and the proposal overall complies with the criteria laid out on pages 4 and 5 of the SG. It will be a successful, sustainable place. It will be a low carbon place. It will be a natural, resilient place (materials, planting, boundary treatments are exemplary) and the opportunity for home working (given the size of the new family homes) is plentiful.

THE EXPERT ANALYSIS OF THE SITE in RESPECT OF BROWNFIELD LAND

We have joined forces with Daniel Henderson of Development and Environmental Services who is an expert on brownfield and contaminated land. We consider him an essential cog in our wheel of professionals. He has given expert opinion at public enquiries, planning applications and appeals and is a ‘go to’ person in peer- led reviews nation-wide.

The following is Daniel’s opinion and it is directly quoted from his response to the email from the case officer dated 23/10/2020.

Firstly, he states that the scale of development is commensurate with the scale of remediation required. This is one of the main issues raised by Katrina Walker. He goes on to say “ when the development is compared to historic mapping, the original house was located on what is plot 3; the other more substantial buildings were on what is plot 1; the well is located within plot 2(and still visible); there is also a heap of rubble within plot 4 and this rubble is influencing the position of the access tracks between plots 3 and 4.

A cesspit serving the house is likely to be to the east (plot 3) or north (plot 4) of the footprint of the original house and, given that there was a house and buildings on the site for more than 100 years, it is certain that ashes and other materials have been deposited in the near vicinity of the former buildings. In terms of potential contaminants and the fact that there was an open - ended shed (demolished 2015) there is a considerable risk of chemical contamination from herbicides, pesticides, timber treatment chemicals such as creosote/CCA and hydrocarbons. Heavy metals would not be uncommon. Buildings on farm steadings often had asbestos present and we would expect to find this dangerous substance on the application site. Arsenic is another common contaminant of historic farm buildings and given that there an extant planning permission for a house(residential is a very sensitive landuse), there was no Contaminated Land Survey conducted in 2014/15, so we do question the safety of this site as it stands. But of course a programme of remediation can make this land safe again.

As Joanne, the case officer, has not requested a Contaminated Land Survey (CLS) because the planning application site’s brownfield credentials are being questioned. We of course, should this opinion change,

and the extensive brownfield land throughout the site being accepted by the Council, we are more than happy for a 'prior to the commencement of development' planning condition being applied to ensure a CLS is carried out and that full remediation will be undertaken. This site is not naturalising well. Given that the site has been degraded over many decades, one would expect there to be a significant level of pioneer plant species, including tree growth consisting of Rowan and Birch in the main. As can be seen on site this regeneration is not occurring and the only reason for that (given that there the site is surrounded by woodland and potential windblown seeds being prevalent in the area) is that the land is unfit for decent plant establishment due to elements in the soils preventing normal regeneration.

We consider that it is important to recognise that Rural Brownfield Land is seldom designated as "Contaminated Land"- as defined in terms of Part 2A of the Environmental Protection Act 1990. We, however, cannot guarantee that there is no risk to people and the environment by leaving this site alone. Please note a house has been granted here without a safety net of a remediation plan being in place.

The PKC definition is also helpful in relation to Contaminated Land. That is "land that is polluted or harmed in some way making it unfit for safe development and usage unless cleaned". In practice, we anticipate that many parts of the site will present unsafe contamination. We predict that there will be some much - needed remediation in all the 4 plots (including of course where the extant planning permission sits).

OVERVIEW of the DEVELOPMENT PROPOSAL in RELATION to PRIOR USES

Given the site history and that it was sold by the Stobhall Estate as a 7 acre smallholding, with a cottage, steading, old barn, woodstore, hen house and implements shed-and a pendicle or pendicles(subsidiary land or property in Scots language), it is clear and unequivocal that it is **impossible** for all those structures to only cover the land where the last building(the open-ended shed) was located.

Although the site has been cleared of all historic buildings and structures (although some footings/substructures remain) there is no doubt that there were numerous structures upon the site and a desk study and a walkover(by all the consultants involved, as well as by the applicant) provides strong physical evidence that the land has been greatly degraded by the former uses and activities.

We believe that redevelopment of the site for housing is the most appropriate way in which viable remediation can be delivered. This of course has been recognised by PKC by the approval of planning applications 09/02/2015 and 14/002134/FLL for a house. The latter permission is extant.

Much has been made of the description of a bare field of tussocky grass. Because all the buildings have been demolished and the grass sward is long, that is how it appears-on the surface. It is clear to see that the type of vegetation across the site is typical of nutrient poor soils where basically only rough, tough grasses can establish. This type of vegetation does not have a high biodiversity profile. The fact is that the tussocky grass is evidence of the land being brownfield. This mono-type plant cover is again confirming the presence of contaminants over the whole site.

The case officer has not requested a Phase 1 or Protected Species Habitat Surveys because it was assumed that only in the small area of the open shed was the only brownfield element on the site and the 4 houses were going to be refused. As in the case of contaminated land, should the Council positively review their negative stance on their intended decision on this application, we will gladly accept a 'prior to development starting on site' planning condition to conduct those studies on the fauna and flora of the site. In terms of biodiversity, it is the surrounding woodland that contains the best of the habitats in this locale. That of course is why we have made a great emphasis of the importance of the applicant's ownership and control of the Wester Balhomie woods and our intention to properly manage them for continuous cover and habitat enhancement and protection. The woodland clearly provides a wonderful setting for the 4 houses! A diagram on page 7 of Katrina's SG illustrates this perfectly.

SCOTTISH GOVERNMENT STATEMENTS (on Covid 19, planning and economic and societal recovery).

Letters regarding Covid 19 were sent to all local authorities on 03/04.2020, 29/05/2020 and 02/07/2020 by John Mc Nairney, the Chief Planner and Kevin Stewart, Minister for Local Government, Housing and Planning. The letters acknowledged that Covid 19 has "turned life upside down for everyone and forced an urgent rethink" - by both the Chief Planner and the Planning Minister/Scottish Government.

They collectively all recognise the critical role of planning in supporting our future economic and societal recovery and our future health and well-being; and they advocate that those working in planning and across sectors should "do what we can to keep plans and proposals moving; taking new approaches, including taking a pragmatic view when making decisions vital to the recovery of our communities and businesses". The letters and advice therein are material considerations and of course the construction industry, and firms such as Freewheelon'Ltd are essential to a successful renaissance of the Scottish economy.

The PKLDP refers to the importance of growing the local economy and creating more jobs. Approving projects that will deliver growth; provide stimulus to the local economy; contribute to local schools through contributions and to the Council by tax levied makes perfect sense, and in this case makes the best and sustainable use of this site. It must be reinforced that as a lot of people will continue to work from home, that these house designs and the beautiful environment really lends itself to this way of life and doing business.

CONCLUSION

We strongly feel that we have proved the case that the WHOLE site is brownfield by the Council's own definitions, policies and guidance. It now stands that the PKC as Planning Authority must present their evidence against this carefully considered view. We look forward to the DM and Policy officers' reply to this statement in early course.

Anne Cunningham MRTPI,

With Daniel Henderson and SKAD (Craig Sutherland and Euan Miller).

October 2020

LRB-2020-28 – 20/01197/FLL – Erection of 4 dwellinghouses, land 350 metres south east of Broadgreen, Cargill

REPRESENTATIONS

Comments to the Development Quality Manager on a Planning Application

Planning Application ref.	20/01197/FLL	Comments provided by	Katrina Walker
Service/Section	TES: Development Plans	Contact Details	Planning Officer [REDACTED]
Description of Proposal	Erection of 4 dwellinghouses		
Address of site	Land 350 Metres South East Of Broadgreen, Cargill		
Comments on the proposal	<p>The proposal is for the erection for 4 houses on a countryside site. Planning permission was granted previously for one house under category 5 of the Housing in the Countryside Policy as it replaced an existing building on the site. I understand that this permission has been implemented but the house has not been built. The principle of the proposal falls to be assessed against Policy 19: Housing in the Countryside of the LDP and the associated supplementary guidance.</p> <p>The proposal is not within or an extension to an existing building group (Category 1), nor is it an infill site under Category 2. The supporting statement states that the overall scheme will include the management of the surrounding woodland, but I do not consider that this would be sufficient justification under 'Houses for Sustainable Living', besides, this category (3.5) only allows for single houses. No evidence has been submitted that the proposal complies with any other part of Category 3 – New Houses in the Open Countryside either. From reviewing the site photographs there would not appear to be any buildings on the site – other than a very small wooden shed / hut – and so the current proposal would not comply with category 4 or 5.</p> <p>That only leaves category 6 – Development on Rural Brownfield Land. This category allows for the redevelopment of derelict land which is defined as: land which was at one time occupied by buildings or structures but these have now been removed, or land directly linked to former buildings or structures, which has been so damaged by a former use that it cannot be left to naturalise or be reused for another purpose without first being improved. The site photographs appear to show that the site is an open grassy area and the supporting statement confirms it is 'a bare field of tussocky grass'. Whilst an old building originally stood on the site (and was granted permission for replacement) this has now been removed and no evidence has been submitted that the site would meet the definition of derelict land under category 6.</p> <p>I therefore have to conclude that, based on the information provided, the proposal does not comply with any of the categories of Policy 19 of the LDP and I am concerned that, if approved, it could set an undesirable precedent for other parts of Perth & Kinross.</p>		
Recommended planning condition(s)	None		
Recommended informative(s) for applicant	None		

Date comments returned	24/9/20
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From: Paul Kettles
Sent: 29 September 2020 18:41
To: Joanne Ferguson
Cc: Joanna Dick
Subject: Planning Application Ref: 20/01197/FLL - Erection of Four Houses, Land 350 Metres South East Of Broadgreen, Cargill.

Hi Joanne

Further to our discussion earlier today, I trust this is of some assistance.

I have looked over the proposed site layout, tree report, the constraints plan, the tree survey plans (2), and supporting statement in respect of the planning application ref: 20/01197/FLL, and provide the following comments:-

1. The tree report whilst generally informative lacks specific details on how the development will be integrated without impacting the trees. This is borne out by Adam Reidi, as he states twice within both the report Introduction and Methodology that it does not include an assessment of the suitability of the development and potential impact on the trees at the site. The application is therefore deficient on this level of detail, and so cannot be properly assessed. Adam Reidi's brief has been too narrow.
2. I consider that the supporting statement advises with naïve optimism that the trees at the site will not be impacted by the development, and the writer does not suggest any detriment to the trees represented at the site, either in the short term, or longer term, this position is simply unrealistic.
3. The virtues of adherence to BS5837 are upheld in a generic sense, yet the technical details directly applying to the implementation of this site are omitted, for example, no CEZ plan has been provided (Construction Exclusion Zone).
4. At no point does the applicant actually consider how the future occupiers will co-exist and live with the mature trees at this site, perceived risk of tree failure, leaf litter, use of garden amenity spaces, etc. Given the number of beech at the site, no comments have been offered to house orientation and light levels, and how the trees at the site will impact on available light to each of the dwellings.
5. Yes, a woodland management plan is muted and could have been included as part of the submission. A woodland survey and woodland management plan would have recognised the broader characteristics (topography/site drainage/canopy cover/biodiversity/ground flora. etc) and virtues of this site, and set objectives for its net improvement.
6. At no point has recognised mitigation measures been suggested in respect of how the site can best be integrated, and adverse impact minimised on retained trees at the site.
7. Tree removal – the layout plan advises of five trees to be removed, yet the tree report states 14 x trees are to be felled (some to ground level and others to main stem/monolith)
 - The fact is that the five trees listed on the site layout plan schedule reflect only those identified to be removed to accommodate the proposed development footprint (which I think has been underestimated), and not by virtue of their condition, and includes three oaks, two of which are Cat B.
 - The site layout plan (and tree survey + tree constraints plans) do not illustrate the trees which the tree report has identified for removal, and gives the impression that more trees are being retained. The site layout and the tree report should speak to each other, and they don't. This is ordinarily confusing and ambiguous.

- At least **nineteen trees** are proposed for removal, not 5 or 14. In addition, the tree report omits those that have not been tagged (a point which the writer acknowledges), and it is clear from the site layout plan that there are numerous trees identified as (NT ..native tree?) that have not been accounted for in the site assessment.
 - No clear plan has been provided showing precisely which trees are to be removed overall and which are to be retained (overall).
8. The supporting statement could have drawn together comments in respect of the overall impact of the design layout and the tree report and clarified some of the above, but doesn't.

Conclusion

- I consider that the information required to make a thorough assessment of the potential impact of this developments on the existing trees and woodland area, has not been provided.
- I do not consider that the development proposal will have a positive benefit on the woodland at this site.

Recommendation

- Refuse the application.

Regards

Paul

Paul Kettles

Enforcement Officer (Trees)

Planning & Development

Corporate and Democratic Services

Perth & Kinross Council

 / <https://www.pkc.gov.uk/treesandtpos>

From: Joanne Ferguson 

Sent: 29 September 2020 14:40

To: Paul Kettles <

Subject: View on proposal

Hi Paul

20/01197/FLL Erection of 4 dwellinghouses

As discussed this morning I have an application for the above site which has an extant permission for one dwelling. The planning consultant would like the view of the Tree Officer on how the proposal could enhance the woodland setting. I currently consider the proposal to be contrary to the HITC Policy and Guide am I not convinced that eh woodland asset is enough to set aside policy and justify the approval of four dwellings.

If you could review and provide comments it would be appreciated. I note in the statement a Woodland Management Plan is referenced but hasn't been submitted or maybe hasn't been undertaken yet.

Regards

Joanne Ferguson
Planning Officer
Development Management
Planning & Development
Perth & Kinross Council
Pullar House

Memorandum

To Development Quality Manager

From Regulatory Service Manager

Your ref 20/01197/FLL

Our ref MA

Date 1/10/2020

Tel No

The Environment Service

Pullar House, 35 Kinnoull Street, Perth PH1 5GD

Consultation on an Application for Planning Permission

RE: Erection of 4 dwellinghouses Land 350 Metres South East Of Broadgreen Cargill for Mr Jim Tait

I refer to your letter dated 17 September 2020 in connection with the above application and have the following comments to make.

Water (assessment date – 1/10/20)

Recommendation

I have no objections to the application but recommend the undernoted condition and informatives be included in any given consent.

Comments

The development is for 4 dwelling houses in a rural area with private water supplies believed to serve properties in the vicinity. To ensure the new development has an adequate and consistently wholesome supply of water and to maintain water quality and supply in the interests of residential amenity and ensure the private water supply or septic drainage systems of neighbours of the development remain accessible for future maintenance please note the following condition and informatives. It should be noted that once the development is operational this Service may have statutory duties detailed in the Water Intended for Human Consumption (Private Supplies) (Scotland) Regulations 2017 to monitor the water quality. No public objections relating to the water supply were noted at the date above.

WS00 Condition

Prior to the commencement of the development hereby approved, details of the location and measures proposed for the safeguarding and continued operation, or replacement, of any septic tanks and soakaways, private water sources, private water supply storage facilities and/or private water supply pipes serving properties in the vicinity, sited within and running through the application site, shall be submitted to and approved in writing by the Council as Planning Authority. The subsequently agreed protective or replacement measures shall be put in place prior to the development being brought into use and shall thereafter be so maintained insofar as it relates to the development hereby approved.

WAYL - Informative 1

The applicant should ensure that any existing wayleaves for maintenance or repair to existing private water supply or septic drainage infrastructure in the development area are honoured throughout and after completion of the development.

PWS - Informative 2

The applicant shall ensure the private water supply for the dwellinghouse/ development complies with the Water Scotland Act 1980 (Section 63), The Private Water Supplies (Scotland) Regulations 2006 and The Water Intended for Human Consumption (Private Supplies) (Scotland) Regulations 2017. Detailed information regarding the private water supply, including the nature, location and adequacy of the source, any storage tanks/ pipework and the filtration and disinfection treatment proposed to ensure provision of an adequate and consistently wholesome water supply shall be submitted to Perth and Kinross Council Environmental Health in line with the above Act and Regulations.

Comments to the Development Quality Manager on a Planning Application

Planning Application ref.	20/01197/FLL	Comments provided by	Dean Salman Development Engineer
Service/Section	Transport Planning	Contact Details	
Description of Proposal	Erection of 4 dwellinghouses		
Address of site	Land 350 Metres South East Of Broadgreen, Cargill		
Comments on the proposal	Insofar as the Roads matters are concerned, I have no objections to this proposal on the following condition.		
Recommended planning condition(s)	Prior to the development hereby approved being completed or brought into use, new public transport infrastructure shall be provided in the form of rural bus boarders on both sides of the A93, with new footpath link from the development access road with suitable pedestrian crossing point between rural bus boarders to a design and specification, through consultation with the Public Transport Unit and to the satisfaction of Perth & Kinross Council as planning authority.		
Recommended informative(s) for applicant	The applicant should be advised that in terms of Section 56 of the Roads (Scotland) Act 1984 they must obtain from the Council as Roads Authority consent to open an existing road or footway prior to the commencement of works. Advice on the disposal of surface water must be sought at the initial stages of design from Scottish Water and the Scottish Environmental Protection Agency.		
Date comments returned	05 October 2020		

Joanne Ferguson

From: TES Biodiversity - Generic Email Account
Sent: 08 October 2020 15:16
To: Joanne Ferguson
Subject: RE: 20/01197/FLL - Erection of 4 dwellinghouses Land 350 Metres South East Of Broadgreen Cargill

Hello Joanne,

Apologies for the delay in responding. No ecological survey of the proposed development area or assessment of the likely effects from this development on habitats and species was submitted alongside this application therefore there is insufficient information to assess the application against Policy 41: Biodiversity. Ecological survey would be required outlining the importance of the habitat, species present, impact of development and proposed mitigation measures.

Best wishes,
Joanna

Joanna Dick
Tree and Biodiversity Officer
[REDACTED]

PKC supports the Tayside Biodiversity Partnership: www.taysidebiodiversity.co.uk

From: Joanne Ferguson <[REDACTED]>
Sent: 01 October 2020 18:37
To: TES Biodiversity - Generic Email Account <Biodiversity@pkc.gov.uk>
Subject: RE: 20/01197/FLL - Erection of 4 dwellinghouses Land 350 Metres South East Of Broadgreen Cargill

Hi Joanna

Note the points below, we won't be supporting the principle of development so I'll highlight to agent but won't be requesting them. In addition (as it will go to LRB) would we need a Protected Species Survey or are the trees coming down not of interest to Bats they seem self-seeded etc?

Regards

Joanne

From: TES Biodiversity - Generic Email Account <Biodiversity@pkc.gov.uk>
Sent: 23 September 2020 17:33
To: Joanne Ferguson <[REDACTED]>
Subject: 20/01197/FLL - Erection of 4 dwellinghouses Land 350 Metres South East Of Broadgreen Cargill

Hello Joanne,

I have reviewed the information submitted for this application and in the Design Statement, a woodland management plan is mentioned but this has not been submitted. I also require landscaping and planting schedule for the compensatory trees.

Best wishes,
Joanna

Joanna Dick

Tree and Biodiversity Officer



PKC supports the Tayside Biodiversity Partnership: www.taysidebiodiversity.co.uk

Memorandum

To Development Quality Manager

From Regulatory Services Manager

Your ref 20/01197/FLL

Our ref LRE

Date 8 October 2020

Tel No

Housing & Environment

Pullar House, 35 Kinnoull Street, Perth PH1 5

Consultation on an Application for Planning Permission

20/01197/FLL RE: Erection of 4 dwellinghouses land 350 metres South East of Broadgreen Cargill for Mr Jim Tait

I refer to your letter dated 17 September 2020 in connection with the above application and have the following comments to make.

Environmental Health

Recommendation

I have no objection in principle to the application but recommend the under noted condition be included on any given consent.

Comments

This application is for the erection of four dwellinghouses within a very rural area and plans indicate that the applicant proposes to install air source heat pumps for each property.

Noise

Manufacture's noise data sheet has been provided for the Ultra Quiet Ecodan PUHZ-W-VAA air source heat pump (ASHP) with a sound pressure level of 45dB(A) at 1 metre from the ASHP.

The applicant proposes to install 4 ASHPs one at each dwellinghouse taking into account the distance between each dwellinghouse at the development, I do not believe residential amenity will be adversely affected.

The World Health Organisation (WHO) issued guidance in 1999 in relation to noise, at which time it was recommended that the following sound levels should be maintained: Leq50-55dB(A) in outdoor living areas, Leq35dB(A) in internal living areas and Leq30dB(A) in bedrooms. This guidance is consistent with BS8233:2014 which recommends the following sound level ranges: Leq30-40dB(A) in living areas, Leq30-35dB(A) in bedrooms and Leq50dB(A) in external amenity spaces with an upper guideline value of Leq55dB(A) in noisier environments.

I would therefore have no objection in principle to the application provided that the undernoted condition is included on any given consent to protect residential amenity of dwelling houses from noise.

Condition

EH10 All plant or equipment shall be so enclosed, attenuated and/or maintained such that any noise therefrom shall not exceed Noise Rating 35 between 0700 and 2300 hours

daily, or Noise Rating 25 between 2300 and 0700 hours daily, within any neighbouring residential property, with all windows slightly open, when measured and/ or calculated and plotted on a rating curve chart.



To:	Joanne Ferguson, Planning Officer
From:	Sophie Nicol, Historic Environment Manager
Tel:	[REDACTED]
Email:	[REDACTED]
Date:	8 th October 2020

20/01197/FLL | Erection of 4 dwellinghouses | Land 350 Metres South East Of Broadgreen Cargill

Thank you for consulting PKHT on the above application.

In respect to archaeology and the planning process, as outlined by Scottish Planning Policy, the proposed development does not raise any significant issues. No further archaeological mitigation is required in this instance.

Comments to the Development Quality Manager on a Planning Application

Planning Application ref.	20/01197/FLL	Comments provided by	Lucy Sumner
Service/Section	Strategy & Policy	Contact Details	Development Contributions Officer: Lucy Sumner
Description of Proposal	Erection of 4 dwellinghouses		
Address of site	Land 350 Metres South East Of Broadgreen Cargill		
Comments on the proposal	<p>NB: Should the planning application be successful and such permission not be implemented within the time scale allowed and the applicant subsequently requests to renew the original permission a reassessment may be carried out in relation to the Council's policies and mitigation rates pertaining at the time.</p> <p>THE FOLLOWING REPORT, SHOULD THE APPLICATION BE SUCCESSFUL IN GAINING PLANNING APPROVAL, <u>MAY</u> FORM THE BASIS OF A SECTION 75 PLANNING AGREEMENT WHICH MUST BE AGREED AND SIGNED PRIOR TO THE COUNCIL ISSUING A PLANNING CONSENT NOTICE.</p> <p>Introduction</p> <p>It is noted that an existing planning consent (14/02134/FLL) for the erection of 1no dwellinghouse has been implemented on-site. The Developer Contributions requirements for that proposal have been paid, therefore the current proposal for 4no dwellinghouses will be assessed for the net increase of 3no dwellinghouses.</p> <p>Primary Education</p> <p>With reference to the above planning application the Council Developer Contributions Supplementary Guidance requires a financial contribution towards increased primary school capacity in areas where a primary school capacity constraint has been identified. A capacity constraint is defined as where a primary school is operating at over 80% and is likely to be operating following completion of the proposed development, extant planning permissions and Local Development Plan allocations, at or above 100% of total capacity.</p> <p>This proposal is within the catchment of Guildtown Primary School. Education & Children's Services have no capacity concerns in this catchment area at this time.</p> <p>Transport Infrastructure</p> <p>With reference to the above planning application the Council Transport Infrastructure Developer Contributions Supplementary Guidance requires a financial contribution towards the cost of delivering the transport infrastructure improvements which are required for the release of all development sites in and around Perth.</p>		

	<p>The site is located within the Transport Infrastructure contributions zone (Appendix 3 of the Supplementary Guidance). The reduced rate will apply (£2,742 per unit) to 3no. units.</p>
Recommended planning condition(s)	<p>Summary of Requirements</p> <p>Education: £0 Transport Infrastructure: £8,226 (3 x £2,742)</p> <p><u>Total: £8,226</u></p> <p>Phasing</p> <p>It is advised that the preferred method of payment would be upfront of release of planning permission.</p> <p>Due to the scale of the contribution requirement it may be appropriate to enter into a S.75 Legal Agreement.</p> <p>If S.75 entered into the phasing of financial contributions will be based on occupation of open market units with payments made 10 days prior to occupation.</p> <p>Payment for each open market unit will be £2,056.50 (£8,226 / 4).</p>
Recommended informative(s) for applicant	<p>Payment</p> <p>Before remitting funds the applicant should satisfy themselves that the payment of the Development Contributions is the only outstanding matter relating to the issuing of the Planning Decision Notice.</p> <p>Methods of Payment</p> <p>On no account should cash or cheques be remitted.</p> <p>Scheduled within a legal agreement</p> <p>This will normally take the course of a Section 75 Agreement where either there is a requirement for Affordable Housing on site which will necessitate a Section 75 Agreement being put in place and into which a Development Contribution payment schedule can be incorporated, and/or the amount of Development Contribution is such that an upfront payment may be considered prohibitive. The signed Agreement must be in place prior to the issuing of the Planning Decision Notice.</p> <p>NB: The applicant is cautioned that the costs of preparing a Section 75 agreement from the applicant's own Legal Agents may in some instances be in excess of the total amount of contributions required. As well as their own legal agents fees, Applicants will be liable for payment of the Council's legal fees and outlays in connection with the preparation of the Section 75 Agreement. The applicant is therefore encouraged to contact their own Legal Agent who will liaise with the Council's Legal Service to advise on this issue.</p>

	<p>Other methods of payment</p> <p>Providing that there is no requirement to enter into a Section 75 Legal Agreement, eg: for the provision of Affordable Housing on or off site and or other Planning matters, as advised by the Planning Service the developer/applicant may opt to contribute the full amount prior to the release of the Planning Decision Notice.</p> <p>Bank Transfers All Bank Transfers should use the following account details; Sort Code: 834700 Account Number: 11571138</p> <p>Please quote the planning application reference.</p> <p>Direct Debit The Council operate an electronic direct debit system whereby payments may be made over the phone. To make such a payment please call 01738 475300 in the first instance. When calling please remember to have to hand:</p> <ul style="list-style-type: none"> a) Your card details. b) Whether it is a Debit or Credit card. c) The full amount due. d) The planning application to which the payment relates. e) If you are the applicant or paying on behalf of the applicant. f) Your e-mail address so that a receipt may be issued directly. <p>Transport Infrastructure For Transport infrastructure contributions please quote the following ledger code: 1-30-0060-0003-859136</p> <p>Indexation</p> <p>All contributions agreed through a Section 75 Legal Agreement will be linked to the RICS Building Cost Information Service building Index.</p> <p>Accounting Procedures</p> <p>Contributions from individual sites will be accountable through separate accounts and a public record will be kept to identify how each contribution is spent. Contributions will be recorded by the applicant's name, the site address and planning application reference number to ensure the individual commuted sums can be accounted for.</p>
<p>Date comments returned</p>	<p>09 October 2020</p>

Comments to the Development Quality Manager on a Planning Application

Planning Application ref.	20/01197/FLL	Comments provided by	Julian Scott
Service/Section	Flooding	Contact Details	
Description of Proposal	Erection of 4 dwellinghouses		
Address of site	Land 350 Metres South East Of Broadgreen Cargill		
Comments on the proposal	Surface water drainage should be designed to the 1:200 year rainfall event, plus a 30% allowance for climate change. It is not clear what event the storage is designed to take. The discharge to the receiving watercourse must also not exceed the greenfield runoff rate. Can supporting calculations please be provided to demonstrate this.		
Recommended planning condition(s)	N/A		
Recommended informative(s) for applicant	N/A		
Date comments returned	09/10/2020		

CHX Planning Local Review Body - Generic Email Account

From: TES Biodiversity - Generic Email Account
Sent: 19 January 2021 17:23
To: CHX Planning Local Review Body - Generic Email Account
Subject: Re: LRB-2020-28

Good afternoon,

The original comments submitted in relation to Policy 41: Biodiversity remain as ecological survey is required to progress this application.

It is noted the applicant would welcome a condition stating that survey be undertaken. Under the direction of Scottish Government, we cannot add suspensive conditions for protected species survey as we must understand the full impacts on protected species and wider biodiversity prior to issuing consent. In order to uphold our Biodiversity Duty outlined in the Nature Conservation (Scotland) Act 2004, we require detailed ecological information to accompany planning application where impact on protected species or habitats is likely.

Best wishes,
Joanna

Joanna Dick
Tree and Biodiversity Officer


PKC supports the Tayside Biodiversity Partnership: www.taysidebiodiversity.co.uk

Dear sir,

I refer to your letter dated 22/01/2021, in regards to application for review under reference LRB-2020-28. in response please add the attached document to the documents for review.

Kind regards,

Euan Miller MArch (Hons) MArch
Architectural Designer

 *Please consider the environment before printing this e-mail*

Stuart King Architecture & Design Ltd

Email: ewan@stuartkingarchitecture.com Tel: 01383 257022 Web: www.stuartkingarchitecture.com

Suite 2, Abtel Building, Pitreavie Business Park, Pitreavie Drive, Dunfermline, KY11 8US

Ecological Assessment

Development Site

Wester Balhovie,

A93

Cargill

Perthshire

PH2 6DU.

January 2021

Executive Summary

Dr. G Mortimer MCIEEM of GLM Ecology has been commissioned to undertake an Ecological Assessment as required by Council. The assessment is to support and inform a planning application for a proposal for housing on land adjacent to the A93, Wester Balhovie, Cargill, Perthshire PH2 6DU.

The survey followed standard methodology as published by the Institute of Ecology and Environmental Management (IEEM), 2018. The survey aimed to assess the ecological value of the site and record any protected habitats or species.

The purpose of the assessment was to document the baseline ecological conditions of the site. The potential of the site for protected species of conservation interest that would require further survey on the basis they might comprise an ecological constraint to the proposed development was undertaken using standard methodology.

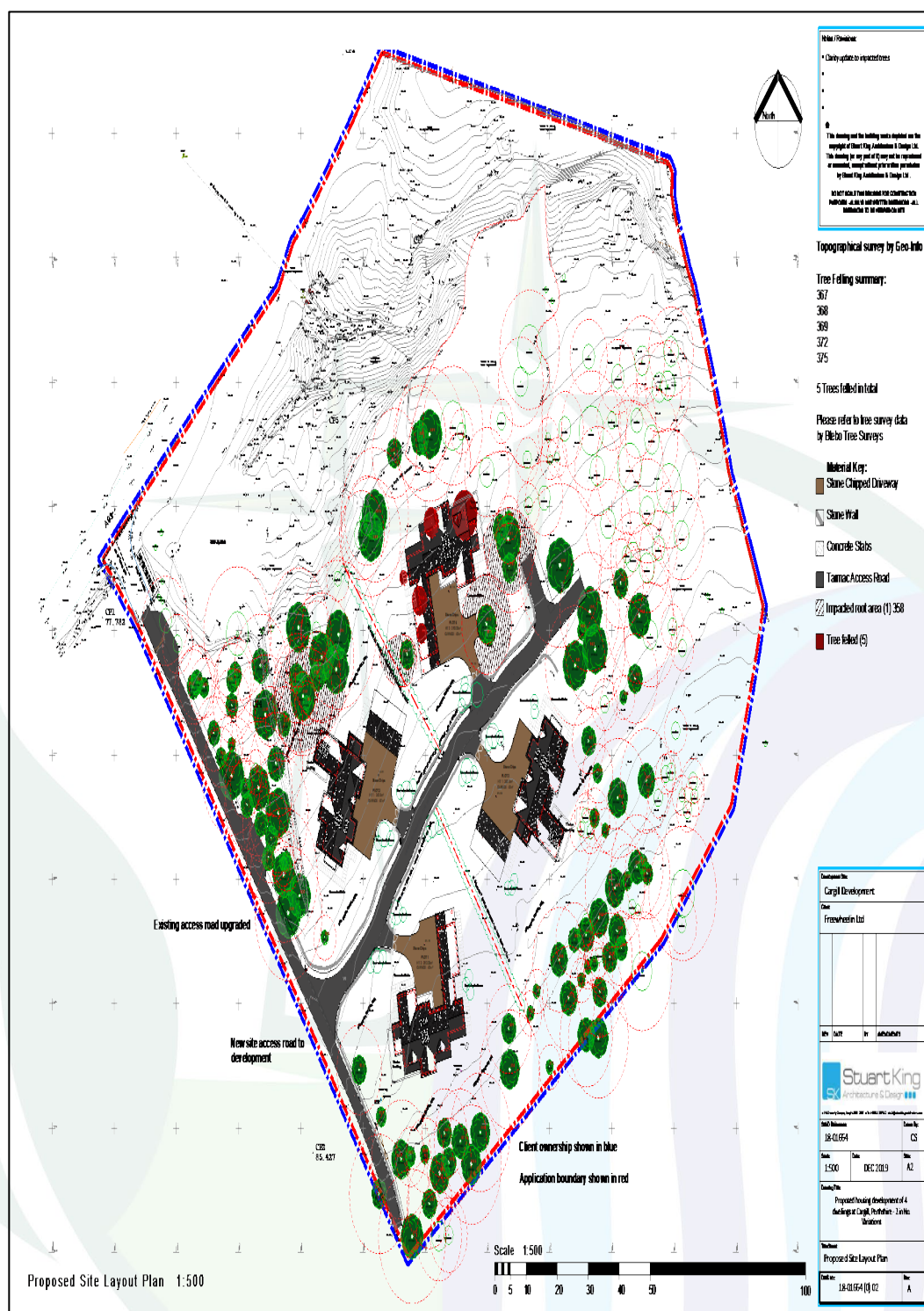
The small woodland site walkover revealed the presence of a limited variety of habitats present within the small survey area. The site is in a wooded area adjacent to the A93. Trees present are predominantly early mature/mature deciduous species (see Blebo Tree Survey Report 2019). A clearing is present within the woodland where housing is proposed. No buildings or standing water are present. Along the northern periphery of the site a burn is present. No invasive species were noted.

The woodland and general survey area has potential to support badger, otter, water vole, red squirrel, breeding birds and bats. It is considered that no protected habitats are present.

Survey work following standard methodology recorded no signs of badger, otter, water vole or red squirrel. Mitigation is proposed for specific trees that need pruning in respect to bats, a bat roost survey/tree inspection will be required before pruning commences. Standard mitigation is proposed for otter and badger during construction.



Figure 1. Ariel photo showing clearing where housing proposed in woodland.



INTRODUCTION

1.1 Introduction

GLM Ecology was commissioned in January 2021 to carry out a site visit to highlight potential ecological constraints and an assessment of the potential for impacts on protected species and habitats for a planning application for housing on a small woodland area of land adjacent to the A93 at Wester Balhovie, Cargill, Perthshire PH2 6DU (Figures 1 & 2).

1.2 The assessment aims were as follows:

- To assess the potential ecological constraints to any development of this site;
- To assess the ecological value of such a site;
- To recommend further survey work if required.

1.3 This report has been undertaken in accordance with the ‘Guidelines for Ecological Impact Assessment in the UK’ (Institute of Ecology and Environmental Management (IEEM), 2018).

1.4 This report identifies approaches likely to be required, subject to formal consultation with Scottish Natural Heritage, Local Planning Authorities and other relevant parties.

1.5 Legislative context

A number of sites, habitats and species are protected under European and UK legislation, and may present constraints to site development.

Principal legislation and guidance which will be considered are:

- Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the Habitats Directive) 1992;
- Conservation (Natural Habitat &c.) Regulations 1994 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- The Nature Conservation (Scotland) Act 2004;
- Protection of Badgers Act 1992;

1.6 Species that are protected include bats, badgers, otters, water voles, red squirrels and great crested newts. Protected sites and habitats include Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPA) and Special Areas of Conservation (SAC). The legislative issues for some of the species that might be affected at Wester Balhormie are discussed below.

1.7 Badgers

Both badgers and their setts are protected by law. The Protection of Badgers Act 1992 (Scottish Version) brings together all of the previous legislation specific to badgers (except their inclusion on Schedule 6 of the 1981 Wildlife and Countryside Act as amended Nature Conservation (Scotland) Act 2004). As a result it is an offence to:

- Willfully kill, injure, possess or cruelly ill-treat a badger, or attempt to do so;
- To intentionally or recklessly interfere with a sett;
- To disturb a badger when it is occupying a sett;
- Damage or destroy a sett;
- To obstruct access to, or any entrance of a badger sett.

A badger sett is defined in the legislation as *'any structure or place, which displays signs indicating current use by a badger'*. 'Current use' does not simply mean 'current occupation' and for licensing purposes it is defined as *'any sett within an occupied badger territory regardless of when it may have last been used'*. A sett therefore, in an occupied territory, is classified as in current use even if it is only used seasonally or occasionally by badgers, and is afforded the same protection in law.

1.8 Bat Legislation

Bats of all species in Britain and their roosts are protected under the Conservation (Natural Habitats, &c) Amendment (Scotland) Regulations 2007. Following recent changes to legislation in Scotland under this law it is illegal intentionally or recklessly to kill or injure a bat, to disturb a roosting bat or to damage, destroy or obstruct access to any bat roost. This applies to both summer and winter roosts, which may be in different structures. Any action, which is likely to disturb or damage a bat roost, requires a license from the Scottish Executive.

METHODOLOGY

1.9 Data Study

A data search was done with SNH Site Link to identify any designated ecological sites within 2km radius of the site.

1.10 Field Survey

A field survey was carried out on January 2021 in good weather conditions.

RESULTS

1.11 Ecological Sites within 5km of Site

Ecological feature	Zone of impact from site boundary	Sites
Internationally designated sites (SPA, Ramsar)	Within 5km	River Tay SAC designated for river lamprey, brook lamprey, sea lamprey, otter, Atlantic salmon, vegetation.
Nationally designated sites (SSSI, NNR)	Within 2km	None.
Locally designated sites (LNR, WS)	Within 1km	None

SITE DESCRIPTION

1.12 The small site is in a rural area to the east of the River Tay south of Cargill. The main habitat is early mature/mature deciduous woodland with a clearing present where housing is proposed. A burn is present at the northern periphery of the site. No buildings or standing water are present (Figures 3-6).



Figure 3. Access to site along track.



Figure 4. Burn outwith construction area.



Figure 5. Clearing where construction proposed.



Figure 6. Deciduous trees present on site.

PROTECTED SPECIES

1.13 Birds

Generally, ornithological surveys on and around the site are required to assess potential impacts of birds throughout the year, which could arise due to:

- Potential loss, fragmentation and degradation of bird habitats arising from the construction of housing and infrastructure;

Discussion

1.14 Given the small size of the residential site and common habitat present it is considered that the proposed construction of houses would have a negligible significance of impact on any breeding species likely to be present.

1.15 Species present would include common passerines that are recorded locally as common residents or summer visitors whose populations are not threatened and are in favourable conservation status in Scotland. None would be specially protected.

1.16 Mitigation

If construction or tree felling/pruning is to start in the bird-breeding season of April-August inclusive then a pre-construction bird breeding survey will be required.

1.17 Protected Mammals

Suitable habitat exists on site for badger, water vole, red squirrel and otter and bats.

1.18 Results

No signs of any badger, water vole, otter or any other protected species were recorded. It is expected that badgers and otters are present in the general area and would traverse across site occasional. It is highly probable that otter would pass along the burn.

1.19 Mitigation

As otter and badger are known to be in the general area and often wander widely and expand their territories the following mitigation is proposed:

- All personnel are made aware that protected species may exist close to the site and are at risk from vehicles;
- All trenches dug during construction and exposed open pipes will be covered at the end of each working day to ensure no risk to badgers, otters or any other wildlife that may have the potential to be trapped; and
- Ramps will be located within the trenches or pits that can't be covered to allow an exit for any mammal that has gone into a trench or pit.

1.20 Bats

The tree survey by Blebo 2019 recommends that 14 trees are felled and that 12 trees are pruned. Any trees to be felled or pruned for construction will require a tree inspection/bat roost assessment before work commences on the trees.

1.21 Protected Habitats

No protected habitats are present.

1.22 Invasive Species

No invasive species were noted.

1.23 Mitigation

None needed for protected flora.

DISCUSSION

1.24 The purpose of this survey was to gain an understanding of the potential ecological issues that may arise during any development at the site. The survey comprised a walkover of the site to evaluate the likely presence of protected species and or habitats. Specific searching was carried out for these protected species and an evaluation of the potential habitat.

1.24 The actual construction area where housing is proposed is predominantly a clearing within woodland. Trees identified by Blebo Tree Survey Report 2019 will need to be felled or pruned.

1.25 The site was surveyed for signs of protected mammals and bats following recognised methodology. No signs were recorded of any protected species, however, given the habitat otters and badgers will be present in the general area.

1.26 Mitigation is proposed for otter, badger and breeding birds.

1.27 No nationally or internationally protected habitats were identified in the assessment.

CONCLUSION

1.28 In my professional opinion the proposed development would have no adverse impact on any protected species or habitats and that no further survey work is required. Mitigation for badgers, otters, bats and breeding birds is requested.

DISCLAIMER

This report has been prepared by Dr Garry Mortimer of GLM Ecology, with all reasonable skill and care within the terms of the agreement with the client. Dr Mortimer disclaims any responsibility to any parties in respect of matters outside this scope.

Best efforts were made to meet the objectives of this study through desktop study and field survey.

Information supplied by the client or any other parties and used in this report is assumed to be correct and GLM Ecology accepts no responsibility for inaccuracies in the data supplied.

It should be noted, that whilst every endeavour is made to meet the client's brief, no site investigation can guarantee absolute assessment or prediction of the natural environment. Numerous species are extremely mobile or only evident at certain times of year and habitats are subject to seasonal and temporal change.

GLM Ecology accepts no responsibility to third parties who duplicate, use, or disclose this report in whole or in part. Such third parties rely upon this report at their own risk.

Document Prepared By
Dr Garry Mortimer
GLM Ecology