

LRB-2020-15 – 19/02068/FLL - Siting of 2 camping pods, formation of a vehicular access and associated works, land 40 metres north east of Leven View, Wester Balgedie

INDEX

(a) Papers submitted by the Applicant **(Pages 95-108)**

(b) Decision Notice **(Pages 111-112)**

Report of Handling **(Pages 113-120)**

Reference Documents **(Pages 121-188)**

(c) Representations **(Pages 189-210)**

(d) Further Information **(Pages 211-222)**

LRB-2020-15 – 19/02068/FLL - Siting of 2 camping pods, formation of a vehicular access and associated works, land 40 metres north east of Leven View, Wester Balgedie

**PAPERS SUBMITTED
BY THE
APPLICANT**

NOTICE OF REVIEW

UNDER SECTION 43A(8) OF THE TOWN AND COUNTRY PLANNING (SCOTLAND) ACT 1997 (AS AMENDED) IN
RESPECT OF DECISIONS ON LOCAL DEVELOPMENTS

THE TOWN AND COUNTRY PLANNING (SCHEMES OF DELEGATION AND LOCAL REVIEW PROCEDURE)
(SCOTLAND) REGULATIONS 2013

THE TOWN AND COUNTRY PLANNING (APPEALS) (SCOTLAND) REGULATIONS 2008

IMPORTANT: Please read and follow the guidance notes provided when completing this form.
Failure to supply all the relevant information could invalidate your notice of review.

Use BLOCK CAPITALS if completing in manuscript

Applicant(s)

Name

ANDREW ORR

Address

[REDACTED]

Postcode

Contact Telephone 1

Contact Telephone 2

Fax No

E-mail*

[REDACTED]

Agent (if any)

Name

[REDACTED]

Address

[REDACTED]

Postcode

Contact Telephone 1

Contact Telephone 2

Fax No

E-mail*

[REDACTED]

Mark this box to confirm all contact should be
through this representative: ☐

Yes ☒ No ☐

* Do you agree to correspondence regarding your review being sent by e-mail?

Planning authority

PERTH + KINROSS COUNCIL

Planning authority's application reference number

19/02068/FLL

Site address

Land 40 metres north east of Leren View,
Wester Balgaden

Description of proposed
development

Siting of 2 camping pods

Date of application

December 2019

Date of decision (if any)

3/3/20

Note. This notice must be served on the planning authority within three months of the date of the decision
notice or from the date of expiry of the period allowed for determining the application.

1. Application for planning permission (including householder application) ☒
2. Application for planning permission in principle ☐
3. Further application (including development that has not yet commenced and where a time limit has been imposed; renewal of planning permission; and/or modification, variation or removal of a planning condition) ☐
4. Application for approval of matters specified in conditions ☐

Reasons for seeking review

1. Refusal of application by appointed officer ☒
2. Failure by appointed officer to determine the application within the period allowed for determination of the application ☐
3. Conditions imposed on consent by appointed officer ☐

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.

Please indicate what procedure (or combination of procedures) you think is most appropriate for the handling of your review. You may tick more than one box if you wish the review to be conducted by a combination of procedures.

1. Further written submissions ☐
2. One or more hearing sessions ☐
3. Site inspection ☒
4. Assessment of review documents only, with no further procedure ☒

If you have marked box 1 or 2, please explain here which of the matters (as set out in your statement below) you believe ought to be subject of that procedure, and why you consider further submissions or a hearing are necessary:

Site inspection

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

1. Can the site be viewed entirely from public land? ☒ Yes ☐ No
2. Is it possible for the site to be accessed safely, and without barriers to entry? ☒ Yes ☐ No

If there are reasons why you think the Local Review Body would be unable to undertake an unaccompanied site inspection, please explain here:

98

Statement

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. Note: 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.

If the Local Review Body issues a notice requesting further information from any other person or body, you will have a period of 14 days in which to comment on any additional matter which has been raised by that person or body.

State here the reasons for your notice of review and all matters you wish to raise. If necessary, this can be continued or provided in full in a separate document. You may also submit additional documentation with this form.

Please see attached document

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 new material, why it was not raised with the appointed officer before your application was determined and why you consider it should now be considered in your review.

List of documents and evidence

Notice of Review

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.

- Supporting Statement + Justification Report;
- Proposed site plan, elevation + section details;
- Location Plan;
- Existing site plan.

Note. The planning authority will make a copy of the notice of review, the review documents and any notice of the procedure of the review available for inspection at an office of the planning authority until such time as the review is determined. It may also be available on the planning authority website.

Checklist

Please mark the appropriate boxes to confirm you have provided all supporting documents and evidence relevant to your review:

- ☒ Full completion of all parts of this form
- ☒ Statement of your reasons for requiring a review
- ☒ All documents, materials and evidence which you intend to rely on (e.g. plans and drawings or other documents) which are now the subject of this review.

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 from that earlier consent.

Declaration

I the applicant/agent [delete as appropriate] hereby serve notice on the planning authority to review the application as set out on this form and in the supporting documents.

Signed

[Redacted Signature]

Date

15/4/20

Firstly, applications of a similar nature within close proximity to the application site have not been assessed in the same regard and there appears to be a lack of consistency in the determination of the applications – most notably 19/01382/FLL and 19/01084/FLL. Neither of these applications have submitted a Business Plan and have the same justification of siting in relation to criteria d) and e) of LDP2 Policy 8, and likewise Policy 9C. I am unsure how these applications differ in meeting these policy criteria other than simply quote a Perthshire Regional Factsheet from Visit Scotland. I am aware that a new LDP is currently in place since these have been determined but the relevant policies remain largely unchanged as far as I am aware.

Most notably, with regards to 19/01382/FLL, with minimal justification submitted, the Report of Handling states:

'The site is fairly open, but you would be expecting this sort of landscape with such a development. There is a degree of landscape framework with the hills to the rear, and is set adjacent to existing buildings which collectively result in a suitable location for this type of development...

No specific details of demand have been submitted, but it is clear that this location would have an obvious marketing value with its views over Loch Leven, and by being fairly remote. As before, it would be acceptable in terms of siting and the impact that it would have on the visual amenity of the area and the landscape.'

I believe the location of my proposal has a further enhanced landscape setting and backdrop in comparison to these applications, with a mature tree belt behind, a more accessible and sustainable site and adjacent to an existing settlement as the policy requests – all of the reasons this exact site was chosen.

In response to the Planning Officers reasons for refusal, please see below:

1. Contrary to Policy 8: Rural Business and Diversification

I believe my proposal fully meets the criteria of this policy and is a perfect example of small scale diversification for an existing agricultural business in uncertain financial times.

At the time the application was prepared, LDP2 had not been adopted and therefore there was no requirement for the submission of a business plan under the previous LDP. The application was submitted a mere 12 days after the adoption of LDP2, which I was unaware of. I believe it would have been reasonable for the Planning Officer to request this information given the very recent adoption of LDP2 and the new requirements, as well as an allowance for a transition period between LDP1 and LDP2.

The submitted Supporting Statement demonstrates why this location was chosen, given its proximity to settlement boundary (a policy requirement) and an existing mature landscape backdrop to ensure the proposal integrates well within the SLA. The submitted drawings demonstrate the minimal visual impact of the proposal. As noted above, there has been a lack of consistency in the application of this policy for this type of development. The application mentioned above has zero landscape buffer or setting and in my opinion, has a

far greater detrimental impact on the SLA and wider landscape but has been granted approval for this very reason.

2. Contrary to Policy 9c: Chalets, Timeshare and Fractional Ownership

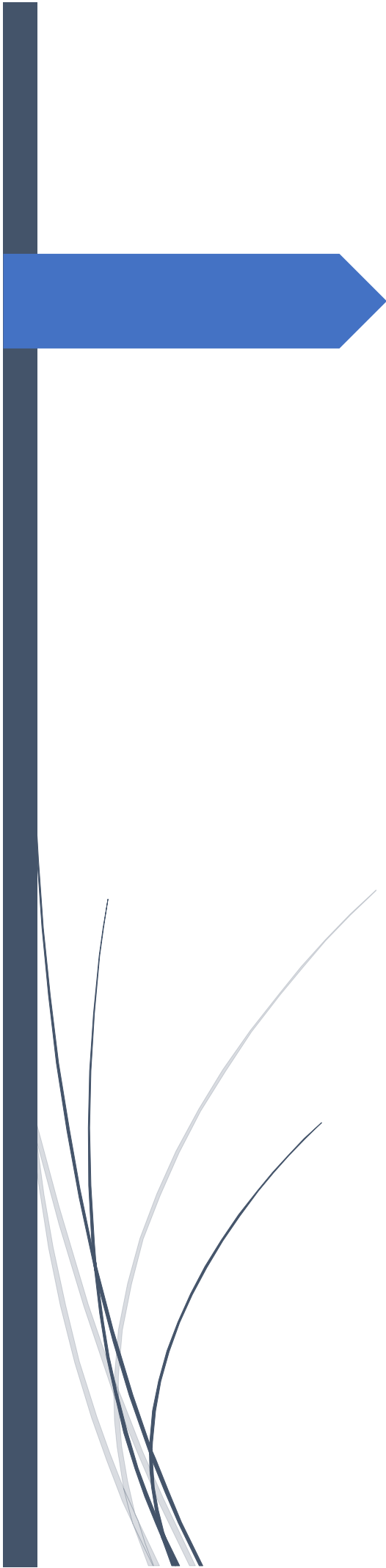
The proposed site location has an outstanding USP affording views over Loch Leven, a mere 200 yards off National Cycle Route 1 and located on the Heart 200 Route, all whilst being nestled into an existing landscape. I believe these qualities are fully adequate to satisfy the requirements of Policy 9c.

As per one of the reasons for approval for this neighbouring application mentioned above which noted in the report of handling, 'it is clear that this location would have an obvious marketing value with its views over Loch Leven' – the exact same statement should be applied to my proposal.

3. Contrary to Policy 46: Loch Leven Catchment Area

I have the information ready for phosphorous mitigation details which should satisfy the SEPA objection, which was explained to the Planning Officer before the application was determined. This information and the calculations are readily available although has not been assessed by SEPA at this stage. Should the LRB wish to approve the application, perhaps a condition could be applied to the consent covering this matter, or the application could be continued if this was the only outstanding issue?

In addition, it may be worth noting that an on-site meeting was held with Portmoak Community Council to discuss the proposals and clarified any concerns they had and no objection was submitted.



Supporting Statement

2.no Camping Pods at Wester
Balgedie, Kinross

The proposal outlines a modest development serving a purpose for the local tourism sector. In line with LDP Policy ED3: Rural Business and Diversification, the development would improve accommodation facilities for tourists by offering a low cost and sustainable alternative to nearby hotels, guest houses and lodges. This development would allow an existing farming business to diversify by providing modest holiday accommodation.

The local area is well frequented with tourists due to the picturesque location, various attractions and numerous outdoor activities available. The area is well connected for walking and cycling and the proposed site sits just 50 yards from SUStrans National Route 1. Scotland's newest driving route, Heart 200 (a small scale version of the popular North Coast 500), also passes the proposed site. There is a range of existing holiday accommodation on offer within the Loch Leven area, however there is minimal sustainable, small scale camping options and it is believed that there is an opportunity for this type of low cost holiday accommodation.

In line with LDP Policy ED4C: Chalets, Timeshare and Fractional Ownership, the camping pods will not be used as permanent residences. Criterion c) of this policy has also been considered in this proposal with the potential provision of good quality, sustainable holiday accommodation in a location with numerous tourism links within close proximity.

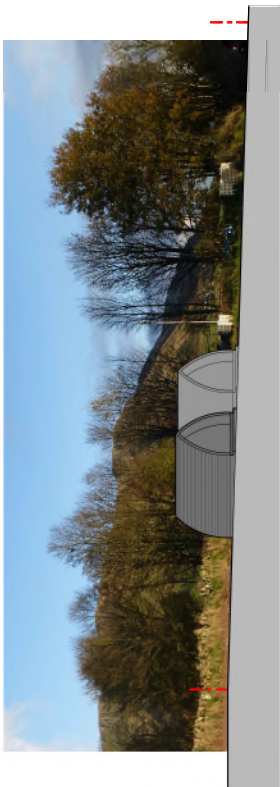
The exact site location is proposed to accord with LDP Policy ED3: Rural Business and Diversification, which favours business diversification and new development to be within or adjacent to existing settlement boundaries. The proposed site is adjacent to the settlement of Wester Balgedie as identified in PKC LDP 2014. The site location has also been chosen as modern day farm machinery cannot easily access this corner to productively farm the land.

Being mindful of the location within the Loch Leven and Lomond Hills Special Landscape Area, this type of small scale, modest development is proposed and would have a very minor impact on the local landscape whilst protecting visual amenity. The surrounding established landscape would be capable of absorbing the proposed development and the materials used would ensure minimal visual impact. Further landscape containment and planting would be proposed to ensure additional screening.

Neighbouring residential amenity has been considered fully, ensuring appropriate distances from residential properties have been achieved and noise pollution mitigation will be in place to ensure their amenity is fully protected. An existing retaining wall at the adjacent property (Leven View) ensures there would be no concerns of overshadowing or overlooking.

It is understood that the site location lies within the Loch Leven Catchment Area, and therefore LDP Policy EP7: Drainage within the Loch Leven Catchment Area would be adhered to in any further planning application. A treatment plant to ensure 125% phosphorous mitigation is proposed.

The full design and specification of the camping pods have been considered against LDP Policy PM1 Placemaking. The materials proposed will respect the surrounding natural and built environment. The pods will be finished with treated timber cladding and a curved PVC membrane roof. Each camping pod would be equipped with a toilet, shower, wash hand basin and small integrated kitchen facility.

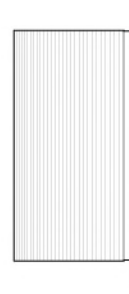


PROPOSED SECTION
1:200

PROPOSED EXTERNAL FINISHES
WALLS & ROOF
NATURAL TIMBER WEATHERBOARD CLADDING
WINDOWS/DOORS
ANTHRACITE GREY PVCU DOUBLE GLAZED
BASECOURSE
GREY MASONRY FINISH



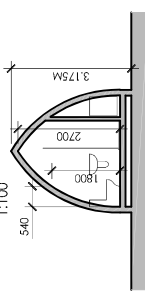
PROPOSED EAST ELEVATION
1:100



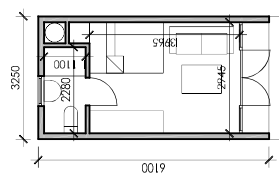
PROPOSED NORTH & SOUTH ELEVATIONS (SIDE)
1:100



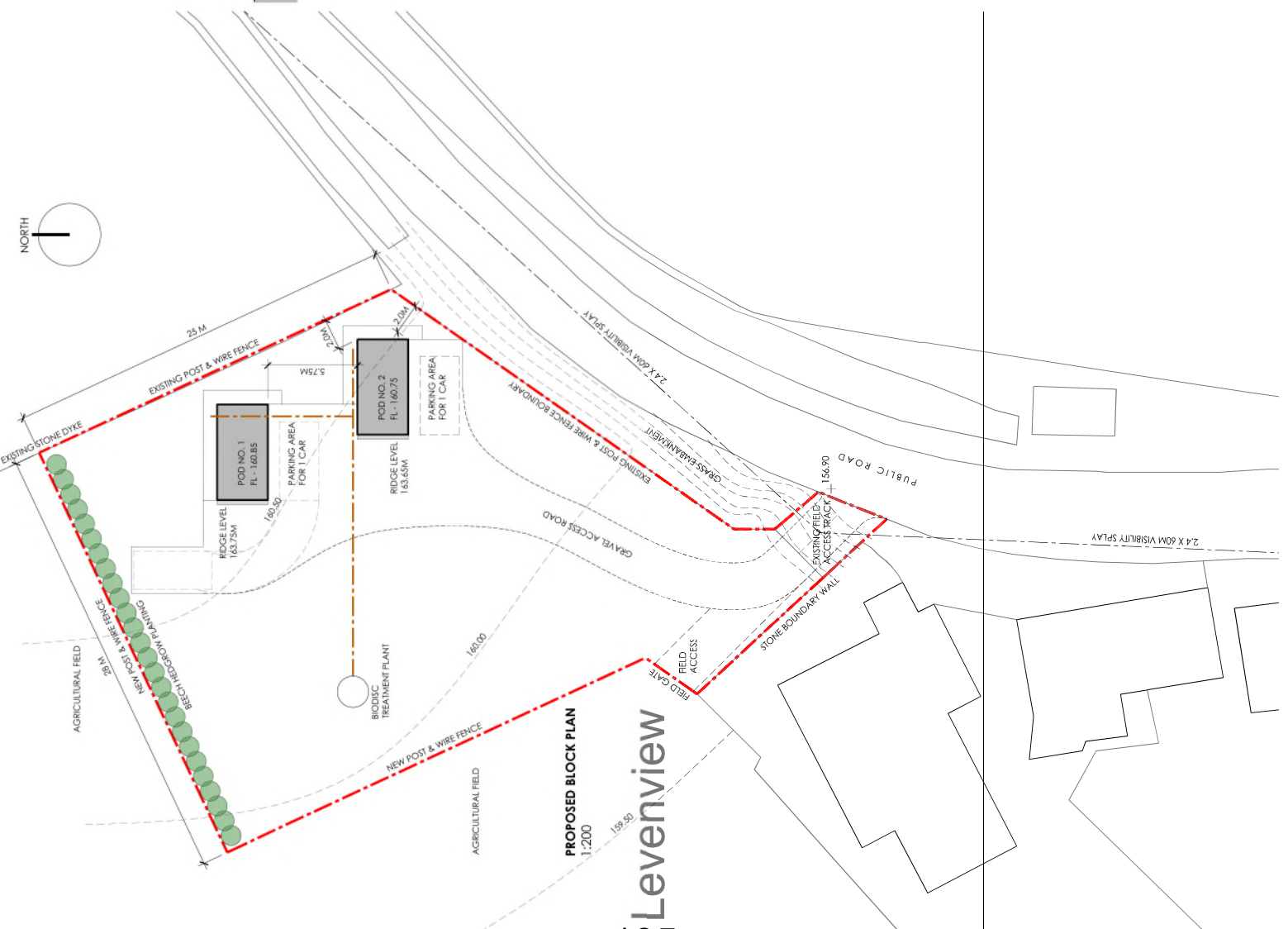
PROPOSED WEST ELEVATION
1:100



PROPOSED SECTION
1:100



PROPOSED PLAN
1:100



PROPOSED BLOCK PLAN
1:200

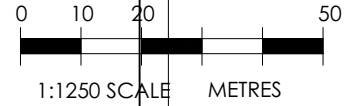
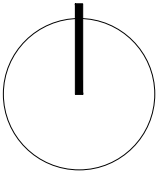
105
Levenview

B.	06.01.20	LEVELS & LANDSCAPING
A.	29.11.19	BIODISC TREATMENT PLANT
REV	DATE	DESCRIPTION
☐	SKETCH PROPOSAL	☐ CLIENT APPROVAL
☒	PLANNING	☐ BUILDING WARRANT
☐	BILLING	☐ TENDER
☐	CONSTRUCTION	☐ AS-BUILT

SCOTTSTRACHANARCHITECT
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scottstrachanarchitect.co.uk

PROJECT	PROPOSED GLAMPING SITE WESTER BALGADIE, KIRKCALDY
CLIENT	MR & MRS A. ORR
DRAWING TITLE	PROPOSED PLAN, SECTION, ELEVATION
DATE	30 OCT 2019
SCALE	1:100/200 @ A2
DRAWING NO.	19/433/PL/001 REVISION B

NORTH



PROJECT
PROPOSED GLAMPING SITE,
WESTER BALGEDIE, KINROSS

CLIENT
MR & MRS A. ORR

DRAWING TITLE
LOCATION PLAN

DATE
06 JAN 2020

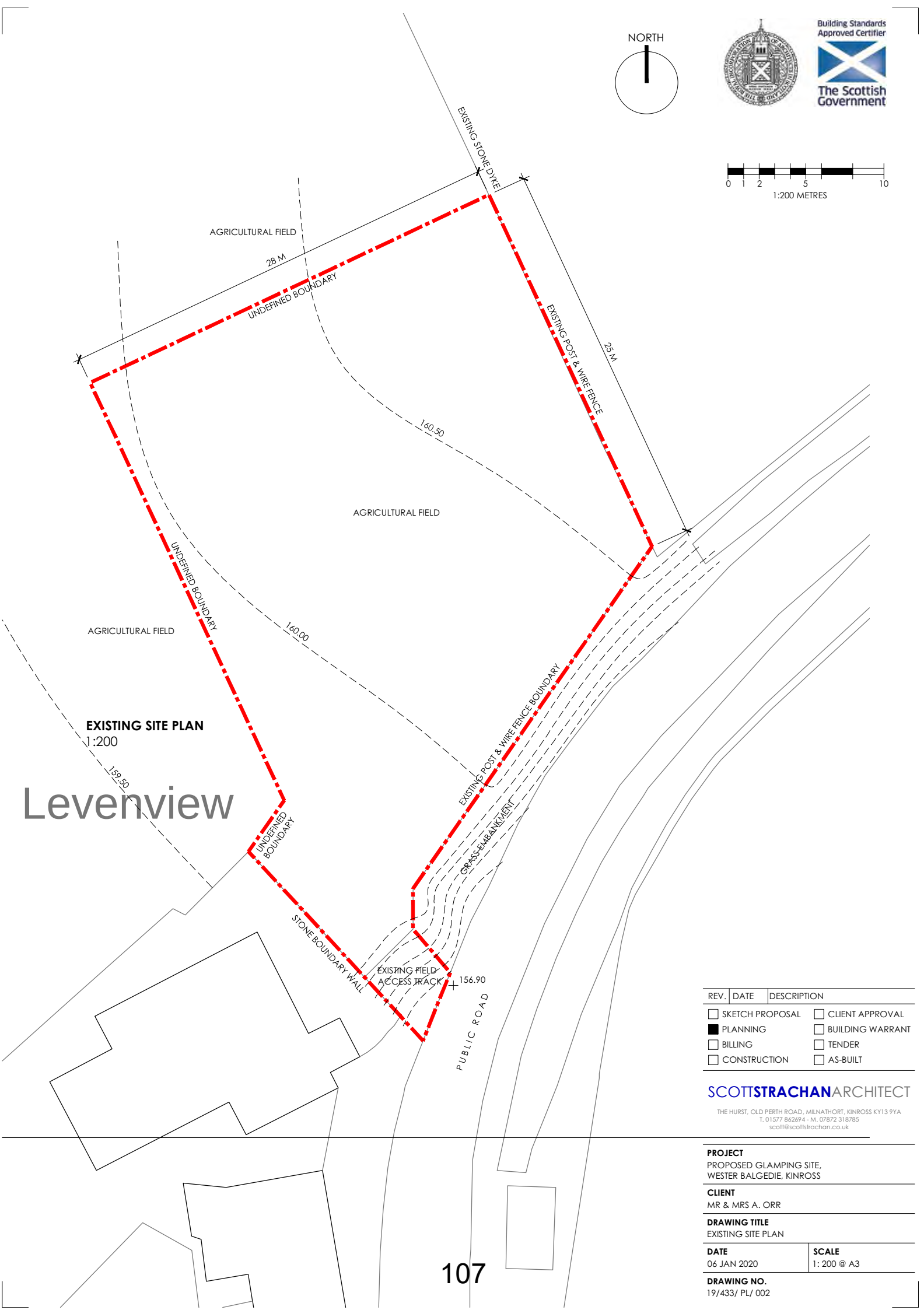
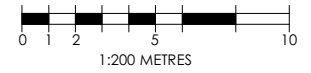
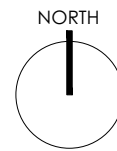
SCALE
1:1250 @ A4

LOCATION PLAN
1:1250

106

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DRAWING NO.
19/433/ PL/ 003



REV.	DATE	DESCRIPTION
☐		SKETCH PROPOSAL
☒		PLANNING
☐		CONSTRUCTION
☐		CLIENT APPROVAL
☐		BUILDING WARRANT
☐		TENDER
☐		AS-BUILT

SCOTTSTRACHANARCHITECT

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scott@scottstrachan.co.uk

PROJECT
PROPOSED GLAMPING SITE,
WESTER BALGEDIE, KINROSS

CLIENT
MR & MRS A. ORR

DRAWING TITLE
EXISTING SITE PLAN

DATE
06 JAN 2020

SCALE
1: 200 @ A3

DRAWING NO.
19/433/ PL/ 002

**LRB-2020-15 – 19/02068/FLL - Siting of 2 camping pods,
formation of a vehicular access and associated works,
land 40 metres north east of Leven View, Wester Balgedie**

PLANNING DECISION NOTICE

REPORT OF HANDLING

REFERENCE DOCUMENTS

PERTH AND KINROSS COUNCIL

Mr Andrew Orr
Lomondmuir Farm
Wester Balgedie
Kinross
KY13 9HE

Pullar House
35 Kinnoull Street
PERTH
PH1 5GD

Date 3rd March 2020

TOWN AND COUNTRY PLANNING (SCOTLAND) ACT

Application Number: **19/02068/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 8th January 2020 for permission for **Siting of 2 camping pods, formation of a vehicular access and associated works Land 40 Metres North East Of Leven View Wester Balgedie** for the reasons undernoted.

Head of Planning and Development

Reasons for Refusal

- 1 The proposal is contrary to Policy 8 Rural Business and Diversification, of the adopted Perth & Kinross Local Development Plan 2 2019, as no suitable justification has been provided for the erection of 2 camping pods in this location. In particular criteria (e) has not been met as the proposal does not meet a specific need by virtue of its quality or location in relation to existing business or tourist facilities. It has not been satisfactorily demonstrated how the siting of these pods, criteria (d) in this prominent location within the Loch Leven and Lomond Hills Special Landscape Area is the most appropriate location to facilitate the development.
- 2 The proposal is contrary to Policy 9C Chalets, Timeshare and Fractional Ownership of the adopted Perth & Kinross Local Development Plan 2 2019 as the proposed site does not meet a specific need by virtue of its quality or location in relation to existing tourism facilities.

- 3 The proposal is contrary to Policy 46 Loch Leven Catchment Area of the adopted Perth & Kinross Local Development Plan 2 2019 as the proposal fails to provide details of proposed 125% phosphorous (P) mitigation.

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

19/02068/1

19/02068/2

19/02068/3

19/02068/4

19/02068/5

19/02068/6

19/02068/7

19/02068/8

REPORT OF HANDLING

DELEGATED REPORT

Ref No	19/02068/FLL	
Ward No	P8- Kinross-shire	
Due Determination Date	07.03.2020	
Report Issued by		Date
Countersigned by		Date

PROPOSAL: Siting of 2 camping pods, formation of a vehicular access and associated works

LOCATION: Land 40 Metres North East Of Leven View Wester Balgedie

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: 17 February 2020

SITE PHOTOGRAPHS





BACKGROUND AND DESCRIPTION OF PROPOSAL

The application is for the siting of 2 camping pods, formation of a vehicular access and associated works. The site is located to the north of the settlement of Wester Balgedie located out with the settlement boundary. The site is bound by the public road to the southeast, to the north east is a stone wall. The site is partially bound by the dwelling to the southwest however the majority of southwest and northwest boundary is undefined and open into the agricultural field.

The proposal is to site the two pods to the east of the site and form new post and wire boundaries with a hedgerow to be planted to the northwest. The access is to adjoin the public road to the south with parking and turning within the site.

SITE HISTORY

19/01104/IPL Erection of 2 camping pods (in principle) 2 August 2019 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 8: Rural Business and Diversification

Policy 9: Caravan Sites, Chalets and Timeshare Developments

Policy 5: Infrastructure Contributions

Policy 46A: Loch Leven Catchment Area

Policy 46B: Loch Leven Catchment Area

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

OTHER POLICIES

Placemaking Guide

CONSULTATION RESPONSES

Environmental Health (Noise Odour) No objection

Scottish Environment Protection Agency Objection lack of information on Loch Leven Catchment phosphorous mitigation.

Portmoak Community Council Concerns raised about noise and path provision

Transport Planning No objection

Scottish Water No objection

REPRESENTATIONS

The following points were raised in the 4 representations received:

- Noise
- Light pollution
- Detrimental Impact on residential amenity
- Provision of future path route
- Contrary to Policy
- Out with settlement boundary
- Loss of prime agricultural land
- Unsafe access
- Impact on conservation area

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	Not Required
Report on Impact or Potential Impact eg Flood Risk Assessment	Not Required

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

The proposal, as the diversification of a farm business, is considered under Policy 8 Rural Business and Diversification. This policy gives favourable consideration to the expansion of existing businesses and the creation of new businesses. There is a preference that this will generally be within or adjacent to existing settlements. Out-with settlements, proposals may be acceptable where they offer opportunities to diversify an existing business or are related to a site specific resource or opportunity. This is provided that permanent employment is created or additional tourism or recreational facilities are provided or existing buildings are re-used.

The supporting statement details that the proposal will be a diversification of an existing farming business to offer low cost holiday accommodation. The site selected adjoins the settlement boundary of Wester Balgedie and whilst there is a preference that sites would be within or adjacent to existing settlements the site is still out with. Sites out with settlements will only be acceptable where they offer opportunities to diversify an existing business.

Proposals under Policy 8 are required to meet number of criteria. Not all of the criteria will relate to the small scale of development proposed and the criteria applicable to this policy are listed in italics with the consideration of the criteria thereafter;

a) that the proposal will contribute to the local economy through the provision of visitor accommodation – the proposal will contribute by providing visitor accommodation.

b) *the proposal will not result in suburbanisation of the rural area or encourage unsustainable travel patterns* – the proposal is small scale and the travel to this site would not encourage unsustainable travel as the area would generally be visited by car.

c) *the proposed use is compatible with surrounding land uses and will not detrimentally impact on the amenity of residential properties within or adjacent to the site* – the site is adjacent to a dwelling which is not within the applicant's ownership. Whilst Environmental Health have no immediate concerns I am not convinced of the siting of the pods in this regard. (discussed further in the residential amenity section)

d) *the proposal can be satisfactorily accommodated within the landscape and environmental capacity of the site* – the site is not fully contained and boundaries would need to be planted/erected to define the site. The site is an elevated exposed position. It has not been adequately demonstrated that the prominent location within the Loch Leven and Lomond Hills Special Landscape Area is the most appropriate location to facilitate the development.

e) *the proposal meets a specific need by virtue of its quality or location in relation to existing business or tourist facilities* – the site forms part of the applicants existing farming business however the location of the applicant's farm and land holding has not been detailed in the submission. The site is not considered to meet a specific need by virtue of its quality as it forms the corner of an agricultural field with no specific qualities which would set the site apart from others.

The supporting statement details that the local area is well frequented with tourists due to the picturesque location, various attractions and numerous outdoor activities available. The area is well connected for walking and cycling and the proposed site sits just 50 yards from SUstrans National Route 1. Scotland's newest driving route, Heart 200 (a small scale version of the popular North Coast 500), also passes the proposed site. There is a range of existing holiday accommodation on offer within the Loch Leven area, however the applicant considers there is minimal sustainable, small scale camping options and it is believed that there is an opportunity for this type of low-cost holiday accommodation. (No evidence has been provided)

Whilst the supporting statement notes activities in the area the proposed development of the site is not meeting a specific need in relation to an existing business or tourist facility. The site is not unique in what it can offer and therefore it is not considered to meet this criteria.

f) *Where any new building or extensions are proposed they should achieve a high quality of design to reflect the rural nature of the site and be in keeping with the scale of the existing buildings* – the design of the pods is considered acceptable for the rural area.

g) *The local road network must be able to accommodate the traffic generated by the proposed development* – the small scale of the proposal could be accommodated on the local road network

The proposal fails on criteria (d) and (e) and therefore does not comply with Policy 8 of LDP2. Additionally the application also does not include a business plan as required by the policy. The proposal is not considered acceptable so this additional information has not been requested.

The proposal is also not considered acceptable under Policy 9C Chalets, Timeshare and Fractional Ownership Criteria (c) as it does not meet a specific need by virtue of its quality or location in relation to existing tourism facilities which has been derailed previously in the assessment of Policy 8 criteria (e).

Design and Layout

The pods are modest in scale and timber clad accommodating a shared living/bed space and small en-suite bathroom. The pods are to be positioned to the east of the site with the parking and access to the south and a parking space beside each pod.

Residential Amenity

The 2 camping pods will to be used for holiday accommodation. The proposed development site is located on land currently in agricultural use with the nearest residential property to the proposed development approximately 25 metres away. The neighbouring property is not within the ownership of the applicant.

The supporting information does not detail where the applicant resides in relation to the pods and how the site would be managed. Environmental Health have not objected and a management plan could address some concern. The lack of information on management and the siting remote from the applicants home could have some detrimental impact for neighbouring properties.

Visual Amenity

The site is in an elevated position on the edge of the settlement. The site has no containment to the northwest and southwest. The applicant has not demonstrated that the siting of the pods in a prominent location within the Loch Leven and Lomond Hills Special Landscape Area is the most appropriate location to facilitate the development.

Roads and Access

Transport Planning have no objection to the proposal. They confirm that the applicant has demonstrated that there is a suitable visibility splay from the junction where the development will join the public road network. Parking and turning is shown within the site.

There is a concern that surface water from the development may discharge onto the public road network, as a result, a condition could be added for the applicant to ensure that no surface water from the development will discharge onto the public road if the application were to be approved.

Drainage and Flooding

The site is located within the Loch Leven Catchment. The Loch Leven Special Protection Area and Ramsar Site supplementary guidance (SG) was adopted in October 2016. The SG requires that information is submitted with Full planning applications for new developments to provide details of proposed 125% phosphorous (P) mitigation.

The reason for this is to ensure that development accords with Policy 46: Loch Leven Catchment Area within the Perth & Kinross Local Development Plan 2 adopted in November 2019. This requires that total phosphorous from built development must not exceed the current level to ensure there are no adverse impacts on water quality in Loch Leven SPA as the catchment has an issue with elevated nutrient levels. Given that this application does not provide any details of required P mitigation SEPA object to this application due to lack of information. Due to my assessment of the principle of siting at this location no further information has been requested from the applicant to address the SEPA objection.

Conservation Considerations

A small part of the site which includes the access to the public road is located within the Wester Balgedie Conservation Area with the majority of the site out with the Conservation Area.

The small scale of the proposal and the simple design of the structures is not considered to have a detrimental impact on the character or setting of the Conservation Area.

Developer Contributions

The Developer Contributions Guidance is not applicable to this application and therefore no contributions are required in this instance.

Economic Impact

The economic impact of the proposal would be in the provision of tourist accommodation.

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 considered not 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 been made within the statutory determination period.

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 8 Rural Business and Diversification, of the adopted Perth & Kinross Local Development Plan 2 2019, as no suitable justification has been provided for the erection of 2 camping pods in this location. In particular criteria (e) has not been met as the proposal does not meet a specific need by virtue of its quality or location in relation to existing business or tourist facilities. It has not been satisfactorily demonstrated how the siting of these pods, criteria (d) in this prominent location within the Loch Leven and Lomond Hills Special Landscape Area is the most appropriate location to facilitate the development.

2 The proposal is contrary to Policy 9C Chalets, Timeshare and Fractional Ownership of the adopted Perth & Kinross Local Development Plan 2 2019 as the proposed site does not meet a specific need by virtue of its quality or location in relation to existing tourism facilities.

3 The proposal is contrary to Policy 46 Loch Leven Catchment Area of the adopted Perth & Kinross Local Development Plan 2 2019 as the proposal fails to provide details of proposed 125% phosphorous (P) mitigation.

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

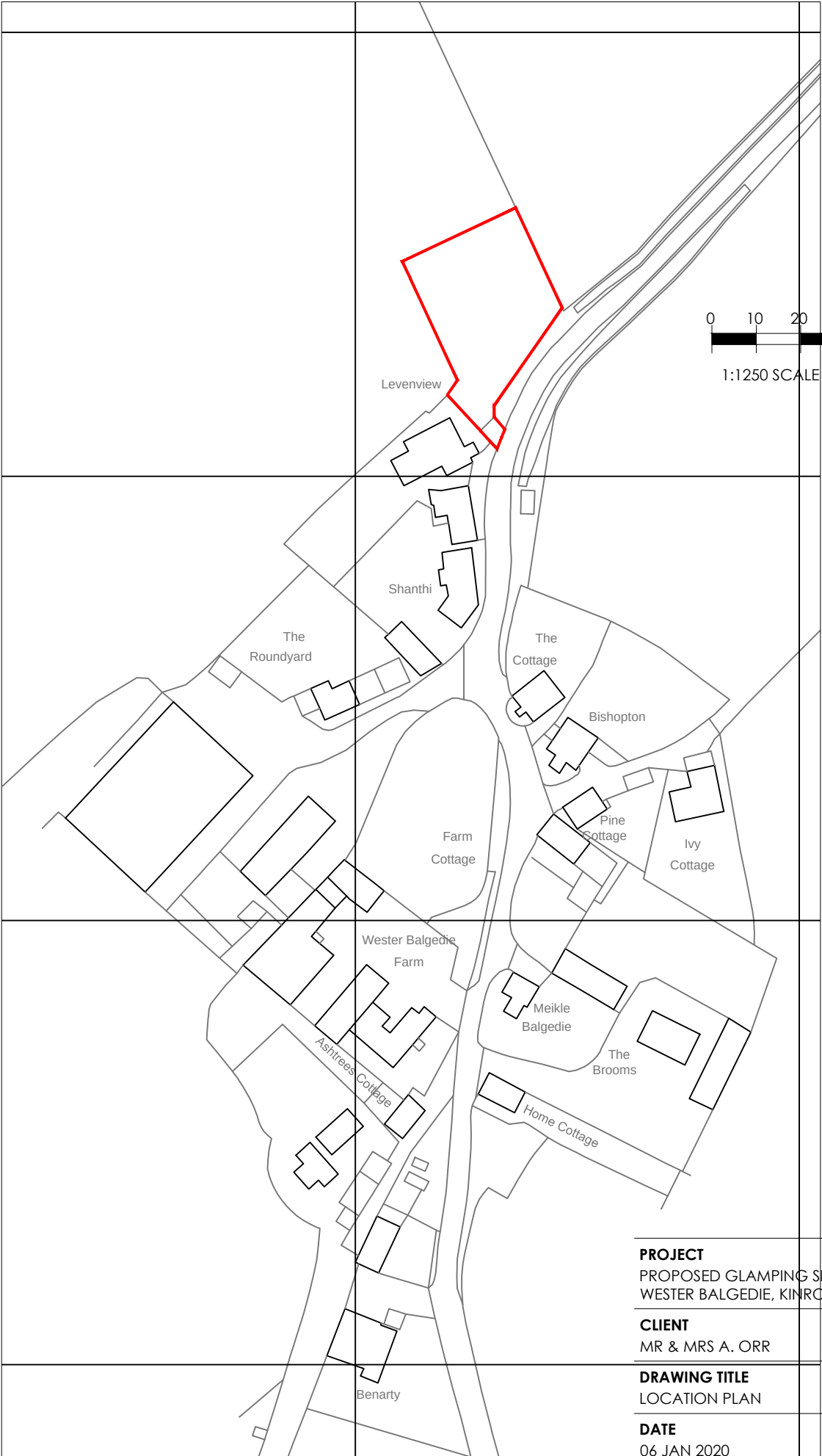
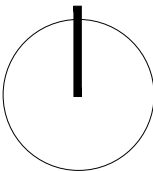
Not Applicable.

PLANS AND DOCUMENTS RELATING TO THIS DECISION

19/02068/1
19/02068/2
19/02068/3
19/02068/4
19/02068/5
19/02068/6
19/02068/7
19/02068/8

Date of Report 02.03.20

NORTH



0 10 20 50
1:1250 SCALE METRES

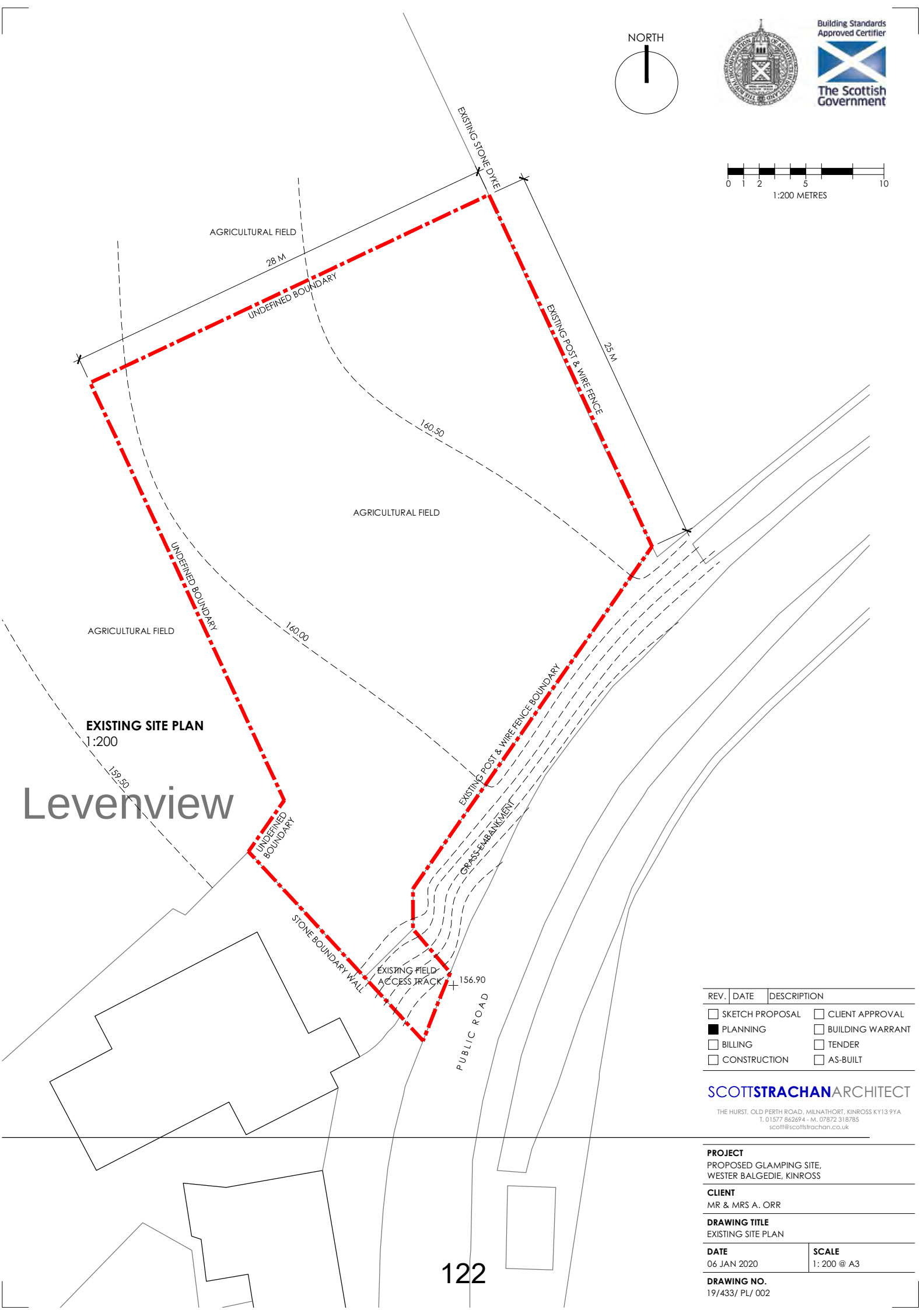
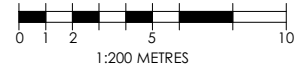
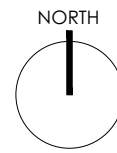
PROJECT
PROPOSED GLAMPING SITE,
WESTER BALGEDIE, KINROSS

CLIENT
MR & MRS A. ORR

DRAWING TITLE
LOCATION PLAN

DATE
06 JAN 2020

SCALE
1:1250 @ A4



Levenview

REV.	DATE	DESCRIPTION
☐		SKETCH PROPOSAL
☒		PLANNING
☐		BILLING
☐		CONSTRUCTION
☐		CLIENT APPROVAL
☐		BUILDING WARRANT
☐		TENDER
☐		AS-BUILT

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scott@scottstrachan.co.uk

PROJECT
PROPOSED GLAMPING SITE,
WESTER BALGEDIE, KINROSS

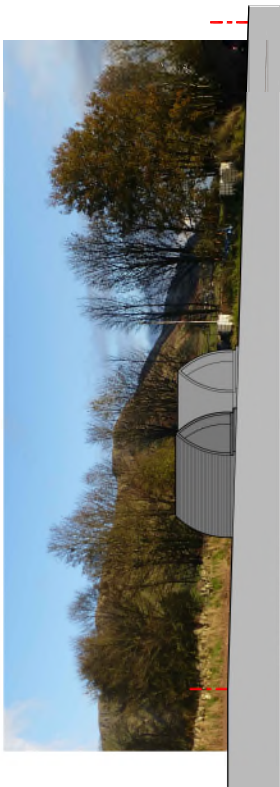
CLIENT
MR & MRS A. ORR

DRAWING TITLE
EXISTING SITE PLAN

DATE
06 JAN 2020

SCALE
1: 200 @ A3

DRAWING NO.
19/433/ PL/ 002

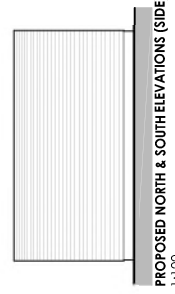


PROPOSED SECTION
1:200

PROPOSED EXTERNAL FINISHES

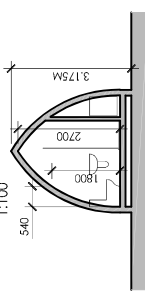
- WALLS & ROOF
NATURAL TIMBER WEATHERBOARD CLADDING
- WINDOWS/DOORS
ANTHRACITE GREY PVCU DOUBLE GLAZED
- BASECOURSE
GREY MASONRY FINISH

PROPOSED EAST ELEVATION
1:100

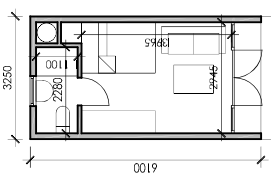


PROPOSED NORTH & SOUTH ELEVATIONS (SIDE)
1:100

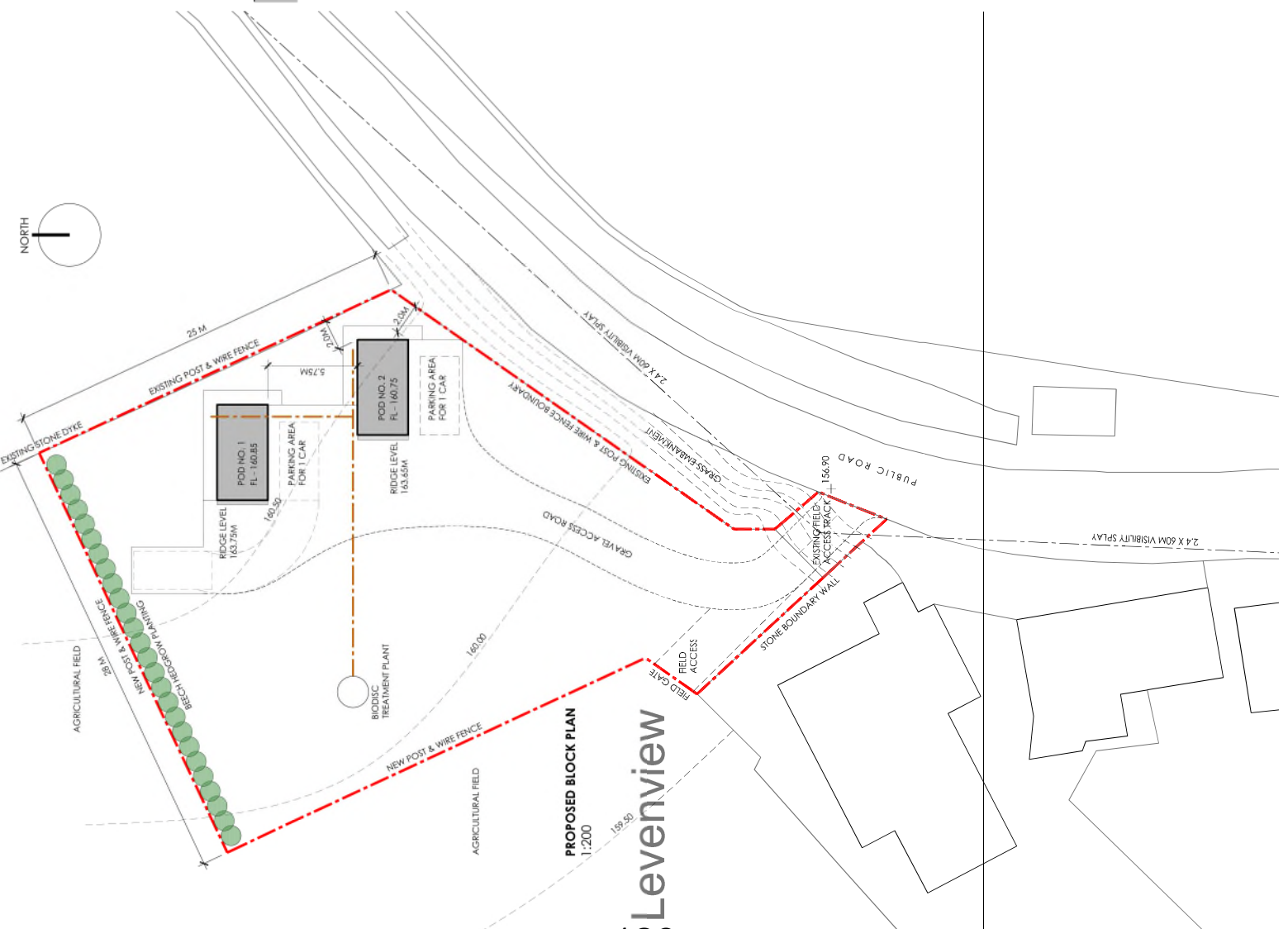
PROPOSED WEST ELEVATION
1:100



PROPOSED SECTION
1:100



PROPOSED PLAN
1:100



PROPOSED BLOCK PLAN
1:200

Levenview

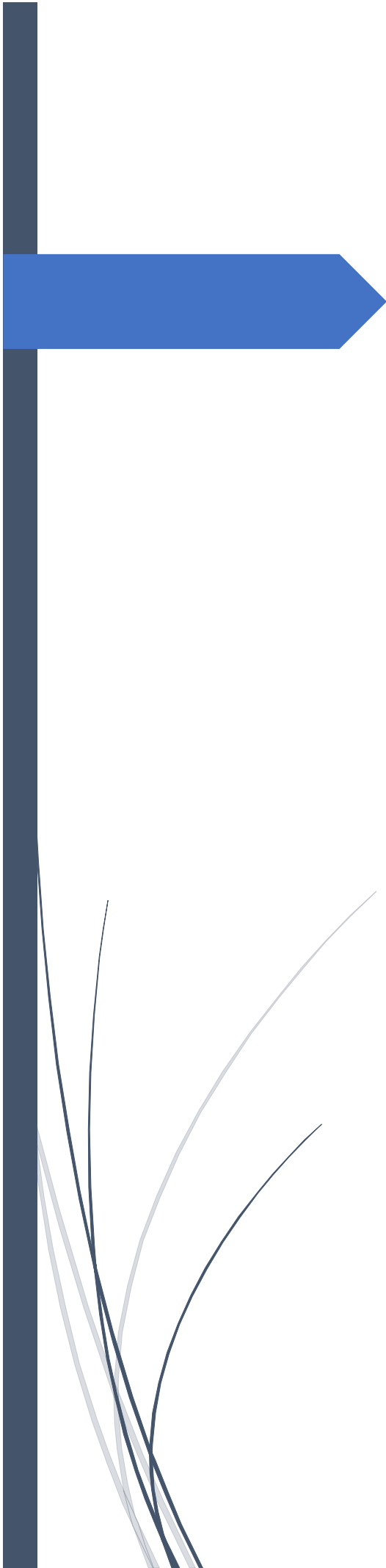
123

REV	DATE	DESCRIPTION
B.	06.01.20	LEVELS & LANDSCAPING
A.	29.11.19	BIDDISC TREATMENT PLANT

- ☐ SKETCH PROPOSAL
- ☒ PLANNING
- ☐ BILLING
- ☐ CONSTRUCTION
- ☐ CLIENT APPROVAL
- ☐ BUILDING WARRANT
- ☐ TENDER
- ☐ AS-BUILT

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PROJECT	PROPOSED GLAMPING SITE WESTER BALGADIE, KINROSS
CLIENT	MR & MRS A. ORR
DRAWING TITLE	PROPOSED PLAN, SECTION, ELEVATION
DATE	30 OCT 2019
SCALE	1:100/200 @ A2
DRAWING NO.	19/433/PL/001
REVISION	B



Supporting Statement

2.no Camping Pods at Wester
Balgedie, Kinross

The proposal outlines a modest development serving a purpose for the local tourism sector. In line with LDP Policy ED3: Rural Business and Diversification, the development would improve accommodation facilities for tourists by offering a low cost and sustainable alternative to nearby hotels, guest houses and lodges. This development would allow an existing farming business to diversify by providing modest holiday accommodation.

The local area is well frequented with tourists due to the picturesque location, various attractions and numerous outdoor activities available. The area is well connected for walking and cycling and the proposed site sits just 50 yards from SUstrans National Route 1. Scotland's newest driving route, Heart 200 (a small scale version of the popular North Coast 500), also passes the proposed site. There is a range of existing holiday accommodation on offer within the Loch Leven area, however there is minimal sustainable, small scale camping options and it is believed that there is an opportunity for this type of low cost holiday accommodation.

In line with LDP Policy ED4C: Chalets, Timeshare and Fractional Ownership, the camping pods will not be used as permanent residences. Criterion c) of this policy has also been considered in this proposal with the potential provision of good quality, sustainable holiday accommodation in a location with numerous tourism links within close proximity.

The exact site location is proposed to accord with LDP Policy ED3: Rural Business and Diversification, which favours business diversification and new development to be within or adjacent to existing settlement boundaries. The proposed site is adjacent to the settlement of Wester Balgedie as identified in PKC LDP 2014. The site location has also been chosen as modern day farm machinery cannot easily access this corner to productively farm the land.

Being mindful of the location within the Loch Leven and Lomond Hills Special Landscape Area, this type of small scale, modest development is proposed and would have a very minor impact on the local landscape whilst protecting visual amenity. The surrounding established landscape would be capable of absorbing the proposed development and the materials used would ensure minimal visual impact. Further landscape containment and planting would be proposed to ensure additional screening.

Neighbouring residential amenity has been considered fully, ensuring appropriate distances from residential properties have been achieved and noise pollution mitigation will be in place to ensure their amenity is fully protected. An existing retaining wall at the adjacent property (Leven View) ensures there would be no concerns of overshadowing or overlooking.

It is understood that the site location lies within the Loch Leven Catchment Area, and therefore LDP Policy EP7: Drainage within the Loch Leven Catchment Area would be adhered to in any further planning application. A treatment plant to ensure 125% phosphorous mitigation is proposed.

The full design and specification of the camping pods have been considered against LDP Policy PM1 Placemaking. The materials proposed will respect the surrounding natural and built environment. The pods will be finished with treated timber cladding and a curved PVC membrane roof. Each camping pod would be equipped with a toilet, shower, wash hand basin and small integrated kitchen facility.

Declaration of performance one2clean



Nr. 008/Translation

1. Unique identification code of the product-type	EN 12566-3: Small wastewater treatment system
2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4)	one2clean 3-18 Inhabitants Type size and serial number on control cabinet type plate
3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer	Cleaning domestic wastewater in a volume of up to 150 l per inhabitant and day with a maximum pollution load of 0.06 kg/BOD ₅ per inhabitant and day
4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5)	Otto Graf GmbH Kunststoffzeugnisse Carl-Zeiss-Str. 2-6 79331 Teningen Germany
5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V	System 3
6. The notifying authority PIA (Prüfinstitut für Abwassertechnik GmbH) - NB 1739 - tested the cleaning performance of the wastewater treatment system. The Carat tank were tested for stability, leaks, durability and fire behaviour, see number 7. The fire behaviour of the Carat XL tank was tested by the Hoch test institute - NB 1508.	

7. Declared performance		
	Performance	Test report No.
Treatment efficiency	COD: 94,2 % 43 mg/l BOD ₅ : 98,0 % 7 mg/l NH ₄ -N: 98,3 % 0,5 mg/l N _{tot} : 87,0 % 7,9 mg/l SS: 96,3 % 14 mg/l	PIA2014-216B14.01.e
Watertightness	Passed	PIA2008-WD-AT0805-1027b
Crushing resistance	Passed	PIA2008-ST-AT0804-1019
Durability	Passed	PIA2008-ST-AT0710-1020+DH
Reaction to fire	Class E	PIA2013-FR-1306-1039

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.
--

Signed for and on behalf of the manufacturer by:

i.V. Arne Schröder
Team leader, product management

Teningen, 08.10.2014

one2clean

DE Betriebsbuch
one2clean

>> Seite 1-19

EN Log Book
one2clean

>> Page 20-38

ES Manual de instrucciones
one2clean

>> Página 39-57





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Betriebsbuch one2clean



Die in dieser Anleitung beschriebenen Punkte sind unbedingt zu beachten. Bei Nichtbeachtung erlischt jeglicher Garantieanspruch. Für alle über GRAF bezogenen Zusatzartikel erhalten Sie separate in der Transportverpackung beiliegende Einbauanleitungen.

Eine Überprüfung der Bauteile auf eventuelle Beschädigungen hat unbedingt vor dem Versetzen in die Baugrube zu erfolgen.

Für die Montage der Anlage erhalten Sie eine separate Anleitung.

Inhaltsübersicht

1.	Allgemeine Hinweise	2
2.	Funktion der Kläranlage	3
3.	Inbetriebnahme der Steuerung	4
4.	Bedienung der Steuerung	5
5.	Betrieb und Wartung	11
6.	Störmeldungen und Störungsbehebung	13
7.	Betriebshinweise	15
8.	EG-Übereinstimmungserklärung	17
9.	Leistungserklärung	18
10.	Technische Daten der Steuerung	19

1. Allgemeine Hinweise

Nachfolgend möchten wir Ihnen ein paar wichtige Hinweise für einen langlebigen und sicheren Betrieb geben:

- Die SBR-Anlage ist ausgelegt für die Einleitung des gesamten häuslichen Schmutzwassers. Die Einleitung anderer Abwässer, z. B. der Abwässer aus Gaststätten und/ oder Gewerbebetrieben etc. ist dann zulässig, wenn diese bereits bei der Auslegung der Anlage bekannt waren und berücksichtigt wurden.
- Biozide, toxisch wirkende oder biologisch nicht verträgliche Stoffe dürfen nicht in die Anlage gelangen, da sie die für die Abwasserreinigung wichtigen Bakterien behindern und zu biologischen Prozessproblemen führen (detaillierte Hinweise folgen auf den nächsten Seiten).

Für die Einhaltung der behördlichen Reinigungsanforderungen ist der Betrieb nach unseren Betriebs- und Wartungsanweisungen dringend erforderlich. Sie finden diese Anweisungen auf den folgenden Seiten.

Wir bitten Sie, darüber hinaus die folgenden Hinweise sorgfältig zu lesen und zu beachten:

- Der Standort der Steuerung zur Innenaufstellung muss ein trockener, gut belüfteter Raum (Keller oder Garage) sein.
- Wird ein Außenschaltschrank verwendet, sollte dieser an einem möglichst sonnengeschützten Ort platziert werden, um Überhitzungen zu vermeiden.
- Es muss dauerhaft gewährleistet sein, dass der Schrank, insbesondere dessen Lüftungsöffnungen nicht abgedeckt und für Wartungsarbeiten frei zugänglich sind.
- Die Stromversorgung muss dauerhaft sichergestellt sein. Bitte achten Sie darauf, dass der Steuer-schrank ausreichend abgesichert ist (16 A). Zusätzliche Stromverbraucher an derselben Sicherung können den Betrieb stören.

2. Funktion der Kläranlage

Die Kleinkläranlage one2clean ist eine vollbiologische Kleinkläranlage und arbeitet nach dem Aufstauverfahren mit Langzeitbelüftung (Sequencing Batch Reactor). Die Anlage besteht grundsätzlich aus einer aeroben Stufe. Diese Stufe ist in eine Ruhe- und Belebungszone unterteilt, die im unteren Bereich miteinander in Verbindung stehen. Bei diesem Verfahren wird somit das gesamte häusliche Abwasser unmittelbar einer aeroben Abwasserbehandlung ausgesetzt. Durch das Einblasen von Druckluft wird die gesamte Anlage belüftet und der entstehende belebte Schlamm reinigt das Abwasser biologisch.

Die im Abwasser enthaltenen Grob- und Schwimmstoffe werden mit Hilfe einer Tauchwand in der Ruhezone zunächst zurückgehalten. Das Abwasser gelangt anschließend über eine Überlauföffnung im unteren Bereich des Behälters von der Ruhezone in die Belebungszone.

Da die Ruhezone mitbelüftet wird, werden die zurückgehaltenen Feststoffe im Laufe der Zeit ebenfalls aerob abgebaut.

Die Abwasserbehandlung erfolgt in der one2clean ohne eine Vorklärung, so dass keine anaeroben Faulprozesse entstehen können.

Der Kläranlagenbetrieb erfolgt über eine Mikroprozessor-Steuerung, die den Luftverdichter und die Luftverteilung ansteuert.

Das SBR-Verfahren ist eine Folge von verschiedenen Arbeitsschritten, die zeitlich nacheinander ablaufen und mindestens einmal am Tag erfolgen.

Arbeitsschritt 1: Belüftung



In der ersten Phase wird das Abwasser unmittelbar einer aeroben Behandlung für eine fest eingestellte Zeit unterzogen. Dadurch werden zum einen die Mikroorganismen (belebter Schlamm) mit dem zum Abbau erforderlichen Sauerstoff versorgt, zum anderen wird über die Druckbelüftung eine Durchmischung erreicht. Die Belüftungseinrichtung der Anlage wird von einem Verdichter mit Umgebungsluft gespeist. Die Belüftung erfolgt intermittierend, sodass es eine gezielte Abwasserreinigung ermöglicht. Somit lassen sich unterschiedliche Milieubedingungen erreichen.

Arbeitsschritt 2: Absetzen



In der zweiten Phase erfolgt keine Belüftung. Der belebte Schlamm und die restlichen absetzbaren Stoffe können sich nun schwerkraftbedingt absetzen. Es entsteht im oberen Bereich eine Klarwasserzone und am Boden eine Schlammschicht. Eventuell auftretender Schwimmschlamm befindet sich über der Klarwasserzone.

Arbeitsschritt 3: Klarwasserabzug



In dieser Phase wird das biologisch gereinigte Abwasser (Klarwasser) aus der SBR-Stufe abgesaugt. Dieser Pumpvorgang erfolgt durch Druckluft nach dem Mammutpumpenprinzip (Druckluftheber). Der Druckluftheber ist so konstruiert, dass eventuell auftretender Schwimmschlamm auf der Klarwasserschicht nicht abgepumpt wird. Ein minimaler Wasserstand in der Anlage wird ohne weitere Bauteile eingehalten.

Nach Ausführung des 3. Arbeitsschrittes beginnt der Reinigungsprozess mit Arbeitsschritt 1 von neuem. Pro Tag werden 2 Zyklen durchgeführt. Eine individuelle Anpassung der Schaltzeiten sind durch das Wartungsunternehmen möglich.

3. Inbetriebnahme der Steuerung

3. Inbetriebnahme der Steuerung

Nachdem die Anlage mit dem Stromnetz verbunden wurde, führt sie einen kurzen Systemtest durch, in dieser Zeit leuchtet die LED rot. Anschließend schaltet die LED auf grün um und die Startphase ist beendet.

Während des Systemtests erscheinen für kurze Zeit die Anzeigen „SYSTEM TEST ... OK“, die Programmversion und die Seriennummer der Steuerung. Danach wird der momentane Betriebszustand der Anlage angezeigt. Nach Beendigung des Systemtests ist das Datum und die aktuelle Uhrzeit zu überprüfen und ggf. einzustellen (siehe Abschnitt 4.2.3).

Im Anschluss an die Kontrolle von Datum/ Uhrzeit ist eine Funktionskontrolle der Anlagenteile durchzuführen. Die Kontrolle kann nur erfolgen, wenn die erforderlichen Luftschläuche angeschlossen sind. Die Kontrolle ist über den in der Steuerung vorgesehenen Menüpunkt „Handbetrieb“ zu erfolgen. Hierbei sind die einzelnen Anlagenteile auf Funktion zu testen.

Nach der erfolgreichen Kontrolle ist die Anlage in den Automatikbetrieb zurückzusetzen.

Bei Zweibehälteranlagen ist der an der Steuerung montierte zusätzliche Luftverteiler (s. Abb. 1) den Einbaugegebenheiten der Anlage entsprechend einzustellen. Hierzu wird in der Steuerung der Menüpunkt „Handbetrieb“ (siehe Abschnitt 4.2.2) gewählt und die Belüftung eingeschaltet. Während der eingeschalteten Belüftung müssen die Ventile so eingestellt werden das ausreichend Schlamm zurückgeführt wird bei gleich starkem Blasenanstieg in jedem der zwei Behälter.



Abbildung 1: Luftverteiler mit Ventilen, 1. Schlammrückführung 2. und 3. Belüfter.

ACHTUNG: Die Funktion des Klarwasserhebers ist nur bei gefüllten Behältern möglich.

Wird Datum und Uhrzeit nicht korrekt eingestellt, werden Betriebsstörungen mit einer falschen Zeitangabe abgespeichert.

4. Bedienung der Steuerung

Die Bedienung der Anlage erfolgt über einen Mikroprozessor in der Steuereinheit. Der Mikroprozessor ermöglicht die Einstellung von Betriebsparametern, die Anzeige von Betriebszuständen und die Abfrage von Anlagenparametern sowie die Programmierung der Betriebszeiten durch einen Fachbetrieb.

Die Einstellung erfolgt durch das Scrollen von Zahlenwerten über die beiden Pfeiltasten  . Die Bestätigung der Einstellung erfolgt anschließend über das Drücken der -Taste.

Die einzelnen Dialoge können vorzeitig beendet werden durch das Drücken von  bzw. werden automatisch beendet nach **2 Minuten**.

Die Steuerung gliedert sich auf die nachfolgenden Anzeigeseiten:

1. Grundebene: Status des Zyklusablaufes mit der ablaufenden Restzeit sowie der Anzeige von Störmeldungen.
2. Betreiberebene: Der Betreiber kann durch das Betätigen der -Taste in die Betreiberebene gelangen und betreiberspezifische Einstellungen vornehmen.
3. Serviceebene: Über einen zusätzlichen Code gelangt man von der Betreiberebene in eine passwortgeschützte Serviceebene. Diese Ebene ist ausschließlich geschultem Personal vorbehalten. Hier können Einstellungen bzw. Änderungen vorgenommen und Diagnosedaten abgerufen werden.

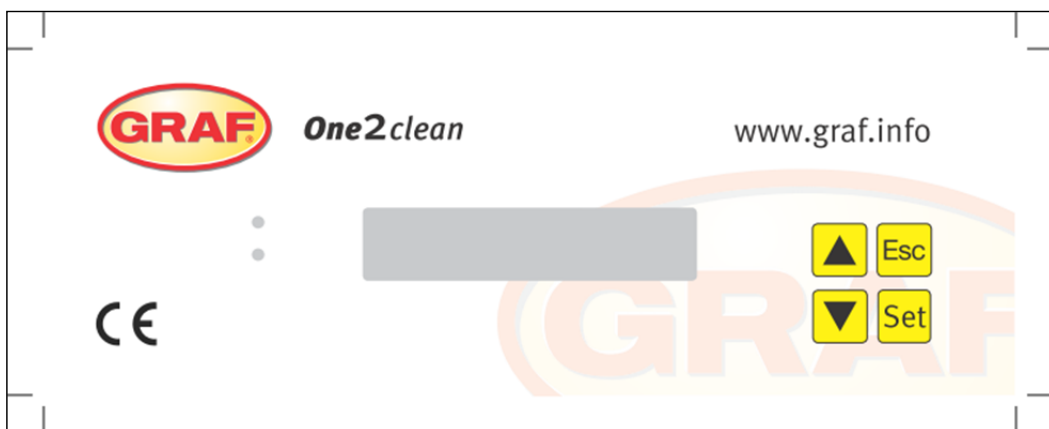


Abbildung 2: Ansicht der Bedieneinheit

4.1 Steuerprogramm

Die Steuerung schaltet zeitgesteuert die Ausgänge für Luftverdichter und Schrittmotoren.

Der zeitliche Ablauf wird durch die eingestellten Ablauftabellen festgelegt. Gemäß der ausgewählten Ablauftabelle wird zur jeweiligen Startzeit ein kompletter Reinigungszyklus gestartet.

Durch die Einstellung von Ferienzeiten in der Betreiberebene kann der komplette Ablauf der Reinigungszyklen für die eingestellte Zeitspanne unterbunden werden. Es findet in dieser Zeit nur ein Ferienzyklus mit stark reduzierter Tätigkeit statt. In dieser Zeit wird kein Abzug von geklärtem Abwasser abgespielt, da kein Zulauf stattfinden sollte.

4. Bedienung der Steuerung

4.1.1 Anzeige des Betriebszustandes

Der Betriebszustand der Anlage wird durch die Leuchtdioden (**Grün** = Betrieb/ **Rot** = Störung) und als Text auf dem Bildschirm angezeigt.

Im normalen Betriebsmodus (Belüftungsmodus) hat die Anzeige folgendes Aussehen:

Belueftung
 Rest: 120:10min

Im Automatikbetrieb zeigt die Flüssigkristallanzeige die aktuelle Arbeitsphase und die verbleibende Restzeit dieses Arbeitsabschnittes an.

Tritt eine Störung auf, schaltet sich die rote LED ein. In der Flüssigkristallanzeige erscheint die Meldung, welches Bauteil gestört ist (z. B. Störung Verdichter 0.0A).

4.1.2 Folgende Arbeitsphasen werden angezeigt

Anzeige	Durchgeführter Vorgang
Denitrifikation	Ventil Y3 (Stecker X1.1) wird intermittierend angesteuert, der Belebtschlamm wird kurz mit dem Abwasser durchmischt. Es folgen lange Pausen (Reaktionszeiten).
Belüftung	Ventil Y3 (Stecker X1.1) wird angesteuert, die Anlage wird in Intervallen über eine längere Zeit belüftet.
Absetzphase	Kein Ventil wird angesteuert, der Belebtschlamm setzt sich in der Anlage ab.
Ablaufphase	Ventil Y4 (Stecker X1.2) wird angesteuert, das Klarwasser wird in den Ablauf gepumpt.
Zykluspause/ Ferienbetrieb	Ventil Y3 (Stecker X1.1) wird angesteuert, die Anlage wird in Intervallen belüftet (wesentlich geringer als bei der Phase „Belüftung“).
Rest: XXX:XXmin	Anzeige der verbleibenden Zeit.

Symbol	Tastenbelegung	Funktion
	Eingabetaste	Auswahl der Betriebsart, Bestätigung von Eingaben
 	Blättern	Anzeigen der Betriebsarten und Abfragen Programmierung der Anlage über die Eingabe von Ziffern
	Quittierung	Quittierung von Eingaben ohne Speicherung Quittierung von Störmeldungen

4. Bedienung der Steuerung

4.2 Bedienen der Steuerung

Sie können aus dem Automatikbetrieb heraus verschiedene Abfragen starten.

Durch Drücken von  gelangen Sie auf die erste Bedienungsebene. Sie können nun mit den Pfeiltasten   und anschließendem Drücken von  die einzelnen Abfragen aufrufen:

Anzeige	Bedeutung
Betriebszustand Restzeit	Aktuelle Arbeitsphase verbleibende Zeit
Betriebsstunden	Anzeige der Betriebsstunden der Ventile und des Verdichters
Handbetrieb	Manuelles Ansteuern der Ventile
Datum Uhrzeit	Aktuelle Uhrzeit, Tag und Datum. Kann über  eingestellt werden
Ferienbetrieb	Einstellen des Ferienbetriebes (max. 90 Tage)
Störungen	Aufgetretene Betriebsstörungen werden hier gespeichert und können ausgelesen werden. Über  bzw.  wechselt man zwischen der Fehlermeldung und dem dazugehörigen Datum
Einstellungen	Über die Pfeiltasten können die aktuellen Einstellungen eingesehen werden
Service-Menü	Für Fachpersonal

4.2.1 Abfrage der Betriebsstunden

Drücken Sie die  -Taste. Auf dem Bildschirm erscheint:

Betriebsstunden
Zählerstand

Durch nochmaliges Betätigen von  können die Betriebsstunden mittels der Pfeiltasten   für die Ventile und den Verdichter nacheinander angezeigt werden.

Durch einmaliges Drücken von  gelangen Sie zurück auf die Anzeige „Betriebsstunden anzeigen“.

Durch Drücken von  gelangen Sie ins Menü „Handbetrieb“.

→ **Hinweis:** Sollten Sie 10 min. keine Taste drücken, stellt sich automatisch der Normalbetrieb ein.

4. Bedienung der Steuerung

4.2.2 Manuelles Ansteuern der Ventile über „Handbetrieb“

Jedes Ventil sollte bei der Überprüfung mindestens 5 Sekunden laufen, da die Überwachung der Stromaufnahme der Ventile einige Zeit in Anspruch nimmt, ehe eine eventuelle Störung erkannt wird.

Im Automatikbetrieb drücken Sie zuerst  anschließend die Pfeiltaste  bis auf dem Bildschirm folgende Anzeige erscheint:

Handbetrieb

Durch erneutes Drücken der  -Taste erhalten Sie folgende Anzeige:

Belueftung AUS

Durch Betätigung von  können Sie das gewählte Programm an- und ausschalten.

Mit den Pfeiltasten  können die weiteren Programme ausgewählt werden.

Durch einmaliges Drücken von  gelangen Sie zurück auf die Anzeige „Handbetrieb“.

4.2.3 Datum/Uhrzeit einstellen

Drücken Sie  und anschließend die Pfeiltasten  bis auf dem Bildschirm folgende Anzeige erscheint (Beispiel):

19-12-2007 Mo
20:15:56

Durch Drücken von  kann dann die Uhrzeit und das Datum mit den Pfeiltasten   eingestellt werden.

Zum Bestätigen der Korrektur muss jeweils  gedrückt werden.

Durch einmaliges Drücken von  gelangen Sie weiter auf den Ferienbetrieb.

Eine korrekt eingestellte Uhr- und Datumsanzeige der Anlage ist zwingend erforderlich, damit die Aufzeichnung der Betriebsstunden und mögliche Störungen nachvollzogen werden können. Eine automatische Umschaltung von Sommer- und Winterzeit erfolgt nicht.

HINWEIS: Sollten Sie 10 min. keine Taste drücken, stellt sich automatisch der Normalbetrieb ein.

4. Bedienung der Steuerung

4.2.4 Ferienbetrieb einstellen

HINWEIS: Der Ferienmodus hat einen reduzierten Betrieb der Kläranlage zur Folge. Er ist nur dann anzuwenden, wenn in dem gewählten Zeitraum kein Abwasser in die Kläranlage eingeleitet wird. Abwasser, das während des Ferienbetriebes in die Anlage gelangt, wird nicht gereinigt. Das Ein- und Ausschalten des Ferienbetriebes erfolgt automatisch zu den von Ihnen eingetragenen Daten.

Drücken Sie , betätigen Sie dann die Pfeiltasten   bis auf dem Bildschirm folgende Anzeige erscheint:

Ferienbetrieb

Durch erneutes Drücken von  wird die Eingabe der Feriendaten freigegeben:

Beg.: JJJJ-MM-TT
Ende: JJJJ-MM-TT

Ferienbeginn:

Der Beginn des Ferienbetriebes wird durch Drücken von   im Format JJJJ-MM-TT eingegeben. Um zwischen den einzelnen Einstellungen zu wechseln, muss jeweils die -Taste gedrückt werden.

Ferienende:

Durch Drücken von   wird analog zum Ferienbeginn auch Jahr, Monat und Tag im Format JJJJ-MM-TT für das Ende des Ferienbetriebes eingegeben.

Mit der -Taste speichern Sie die Eingabe der Daten für den Ferienbetrieb und verlassen diese Funktion.

Durch Drücken von  gelangen Sie zurück zur Anzeige des Automatikbetriebes.

HINWEIS: Sollten Sie 2 min keine Taste drücken, stellt sich automatisch der Normalbetrieb ein, ohne dass eine Speicherung des gerade eingegebenen Datums erfolgt.

4. Bedienung der Steuerung

4.2.5 Alte Störungen

Die Steuerung speichert alle vergangenen Störmeldungen und das Bedienen der Steuerung über die Funktion „Handbetrieb“. Über den Menüpunkt „Alte Störungen“ können die vergangenen Störmeldungen mit Datum und Uhrzeit ausgelesen werden. Die einzelnen Meldungen können mithilfe der Pfeiltasten aufgerufen werden. Über  kann der Menüpunkt wieder verlassen werden.

Störungen werden als Kodierung, nach der Reihenfolge des Erscheinens, beginnend mit Nummer 0 (aktuellste Meldung) angezeigt.

Kodierung	Bedeutung
1	Netzausfall (Anlage ist stromlos)
2	Netz zurück (Anlage bekommt wieder Strom)
3	Verdichter hat Überstrom
4	Verdichter Stromversorgung zu niedrig
5	Handbetrieb

Die Störungen Nr. 2 (Netz zurück) und Nr. 5 (Handbetrieb) sind keine Störungen im eigentlichen Sinne. Sie werden registriert, zur besseren zeitlichen Eingrenzung von evtl. eingetretenen Störungen bzw. Überwachung von manuellen Aktivitäten an der Steuerung.

4.2.6 Einstellungen anzeigen

Unter diesem Menüpunkt können die aktuellen Einstellungen der Steuerung eingesehen werden. Eine Veränderung dieser Einstellungen ist nicht möglich. Dieser Menüpunkt dient zur Analyse der Einstellungen ohne dabei Änderungen vorzunehmen. Die einzelnen Einstellungen können mithilfe von Pfeiltasten   aufgerufen werden. Über  kann der Menüpunkt wieder verlassen werden.

4.2.7 Service Menü

Im Service-Menü können Betriebsparameter verändert werden. Der Zugang ist durch einen Code geschützt. Diese zweite Wartungsebene ist ausschließlich qualifiziertem Fachpersonal vorbehalten!

Bei eigenmächtigem Eingriff in die Steuerungseinstellungen erlischt der Gewährleistungsanspruch!

5. Betrieb und Wartung

5.1 Betreiberpflichten

Die Anlage muss ständig eingeschaltet sein. Der Betreiber ist verpflichtet für einen störungsfreien Betrieb der Anlage zu sorgen. Fast alle Betriebsstörungen führen zu einer Verschlechterung der Reinigungsleistung der Anlage. Diese sind daher frühzeitig zu erkennen und umgehend durch Sie oder durch einen qualifizierten Wartungsmonteur zu beseitigen.

5.1.1 Tägliche Kontrollen

Es ist täglich zu kontrollieren, ob die Anlage ordnungsgemäß in Betrieb ist. Dies ist gegeben, wenn die Betriebskontrolle grün leuchtet und kein Warnsignal zu hören ist.

5.1.2 Monatliche Kontrollen

- Sichtkontrolle auf eventuelle Schlammabtriebe, Trübung oder Verfärbung im Ablauf
- Kontrolle der Zu- und Abläufe auf Verstopfung (Sichtkontrolle)
- Betriebsstundenzähler des Luftverdichters (Gesamtbetriebsstunden), der Belüftung (Ventil Y3) und des Klarwasserabzuges (Ventil Y4) ablesen und im Betriebstagebuch vermerken

5.2 Wartung durch ein Fachunternehmen

Die Wartung ist von einem Fachbetrieb (Fachkundigen) mindestens zweimal im Jahr (im Abstand von ca. 6 Monaten) durchzuführen. Es gelten zusätzlich die in der wasserrechtlichen Einleiterlaubnis von der örtlichen Wasserbehörde festgelegten Zeitintervalle und Arbeiten. Hierfür hat der Eigentümer der Anlage mit einem qualifizierten Fachmann einen Wartungsvertrag abzuschließen.

Folgende Arbeiten sind im Rahmen der Wartung durchzuführen:

- Einsichtnahme in das Betriebsbuch mit Feststellung des regelmäßigen Betriebes (Soll-Ist-Vergleich),
- Kontrolle der Luftfilter des Luftverdichters
- Wartung des Luftverdichters nach Herstellerangaben
- Funktionskontrolle des Luftverdichters und der Schrittmotoren
- Durchführung von allgemeinen Reinigungsarbeiten, z.B. Beseitigung von Ablagerungen,
- Kontrolle der ausreichenden Be- und Entlüftung,
- Untersuchung im Belebungsbecken:
 - Sauerstoffkonzentration ($O_2/l > 2 \text{ mg}$) ggf. Anpassen der Betriebszeiten des Verdichters,
 - Schlammvolumenanteil ($< 900 \text{ ml/l}$),

Sollte das Schlammvolumen über 900 ml/l betragen, ist die Schlammabfuhr zu veranlassen.

Durchgeführte Wartungsarbeiten, sowie eventuell festgestellte Schäden oder ausgeführte Reparaturen und sonstige Veranlassungen sind von der Wartungsfirma in einem Wartungsbericht zusammenzufassen.

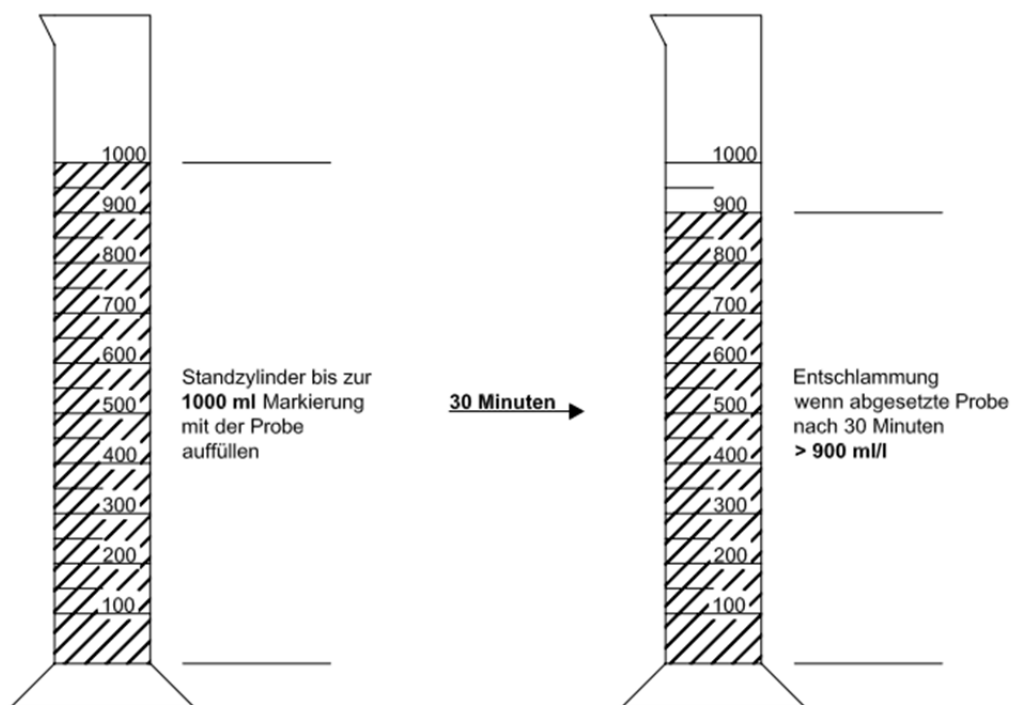
5.3 Bestimmung der Entschlammung

Zur Ermittlung der Notwendigkeit einer Entschlammung der Kläranlage, ist bei den Wartungsintervallen eine Absetzprobe durchzuführen. Für diese Absetzprobe wird der SV30 gemessen. Der SV30 ist das Schlammvolumen, das 1000 ml Belebtschlamm nach einer Absetzzeit von 30 Minuten einnimmt. Es ist ein Maß für die Schlammmenge, die in der Kläranlage vorliegt.

Die Messung des SV30 wird in einen 1000 ml Standzylinder durchgeführt.

Folgende Punkte müssen bei dieser Messung befolgt werden:

1. Belüftung einschalten - falls nicht aktiv – und kurze Zeit durchmischen lassen
2. Schöpfbecher ins Becken eintauchen und Schlammprobe entnehmen
3. Schlammprobe in den Standzylinder bis zur 1000 ml Markierung einfüllen
4. Standzylinder mit der Probe für 30 Minuten erschütterungsfrei stehen lassen
5. Schlammhöhe ablesen, falls Absetzprobe >900 ml/l Entschlammung vornehmen



5.4 Durchführung der Entschlammung

Bei einer Entschlammung der Kläranlage ist nach folgenden Punkten vorzugehen:

1. Entfernen der Abdeckung
2. Entfernen der Ablagerungen auf der Wasseroberfläche und auf allen sichtbaren Flächen (Tauchwand, Probenbehälter, Heber,)
3. Abwaschen der sichtbaren Flächen
4. Einführen des Absaugschlauches in das Klärbecken bis zum Boden
(VORSICHT: Rohrbelüfter am Boden dürfen nicht beschädigt werden!)
5. Absaugen bis ca. 30 cm Abwasser und Schlamm in der Kläranlage verbleiben
6. Nach dem Entleeren muss der Behälter wieder mit frischem Wasser aufgefüllt werden

6. Störmeldungen und Störungsbehebung

Technische Störungen des Anlagenbetriebes (Ausfall eines Aggregates) werden sowohl optisch angezeigt.

6.1 Anlagenverhalten nach Abschalten der Spannungsversorgung

Wird die Anlage vom Netz getrennt (z.B. durch Stromausfall) bleiben das Steuerprogramm und die gezählten Betriebsstunden infolge im Speicher der Anlagensteuerung erhalten. Es leuchtet die rote Leuchtdiode auf. Wenn die Anlage wieder mit Strom versorgt wird, erfolgt ein selbständiger Start der Anlage.

HINWEIS: Wird die Anlage länger als 24 Stunden vom Netz getrennt, ist eine Reinigung des vorhandenen Abwassers nicht oder nur noch stark eingeschränkt möglich.

6.2 Störmeldung in der Anzeige

Störungen werden als Text bzw. als Nummern-Kodierung auf der Flüssigkristallanzeige angezeigt. Die Betriebskontrolllampe leuchtet dann rot.

Die Nummern-Kodierung der Störungen ist nachfolgend erläutert:

1. Netzausfall (Anlage ist stromlos)
2. Netz zurück (Anlage bekommt wieder Strom)
3. Verdichter hat Überstrom
4. Verdichter Stromversorgung zu niedrig
5. Handbetrieb

Die Anzeigen Nr. 2 (Netz zurück) und Nr. 5 (Handbetrieb) sind keine Störungen im eigentlichem Sinne. Sie werden nur als Störmeldungen registriert zur besseren zeitlichen Eingrenzungen von evtl. eingetretenen Störungen bzw. Überwachung von manuellen Aktivitäten an der Steuerung.

Tabelle 1: Störungsursachen und Störungsbehebung

Anzeige	Mögliche Ursache	Behebung
Netzausfall Keine Anzeige, keine Lampe	• Stromausfall • Anlage abgeschaltet • Am Schaltschrank liegt keine Spannung an.	• Überprüfen Sie die Stromzufuhr zur Anlage und zur Steuerung • Anlage wieder einschalten • Zuleitung zum Schaltschrank überprüfen • Stromausfall abwarten
Keine Anzeige, Lampe leuchtet grün		• Anlage abschalten und nach 10 Sekunde wieder einschalten.
Netz zurück	• Stromversorgung wieder vorhanden	
Uhr stellen	• Interne Uhr/Datum nicht eingestellt	• Über Menüpunkt Datum und Uhrzeit einstellen
Verdichter **Überstrom**	• Kurzschluss	• Zuleitung zum Schaltschrank überprüfen
Verdichter **Strom zu niedrig**	• Verdichter arbeitet nicht / nimmt keinen Strom auf	• Überprüfen Sie den Verdichter über Handbetrieb
Handbetrieb	• Anlage wurde manuell im Handbetrieb aktiviert	

6. Störmeldungen und Störungsbehebung

6.3 Ungewöhnliche Wasserstände - Beheben einer Störung

Beobachtung	Mögliche Ursache	Behebung
Der Wasserstand im Belebungsbecken ist ungewöhnlich hoch	- Anlage läuft im Ferienbetrieb, - Anlage läuft ständig in Zykluspause, - Steuerungseinstellungen sind falsch, - Der Ablaufheber ist verstopft, - Der Luftschlauch zum Ablaufheber ist undicht, - Hochwasser im Vorfluter lässt Wasser aus Anlage nicht ablaufen - Steuerung ist defekt.	- Beenden des Ferienbetriebes - Überprüfen der Steuerungseinstellungen durch den Wartungsfachmann - Behälter abpumpen lassen und Heber reinigen - Schlauchverbindungen abdichten - Hochwasser abwarten, - Mit Wartungsfirma in Kontakt setzen
Die Anlage riecht, das gereinigte Abwasser ist trüb bzw. verfärbt	- Es wird zu wenig Luft in die Anlage eingetragen - Einseitige Belüftung durch defekte Rohrbelüfter	- Belüftungszeit durch Servicefirma erhöhen lassen - Überprüfung des Belüftungsbildes, mit Wartungsfirma in Kontakt setzen
Belüftungsbild ist einseitig bzw. es steigen punktuell große Luftblasen auf	- Membraneinheit defekt - Dichtung Rohrbelüfter undicht	- Mit Wartungsfirma in Kontakt setzen - Mit Wartungsfirma in Kontakt setzen

7. Betriebshinweise

Grundsätzlich sind der Anlage nur Stoffe zuzuführen, welche in ihrer Charakteristik häuslichem Schmutzwasser entsprechen.

Biozide, toxisch wirkende oder biologisch nicht verträgliche oder abbaubare Stoffe dürfen nicht in die Anlage gelangen, da sie zu biologischen Prozessproblemen führen. Insbesondere dürfen nicht eingeleitet werden:

- Niederschlagswasser von Dach- und Hofflächen,
- Fremdwasser (z.B. Dränwasser),
- Rückstände aus der Tierhaltung in fester und flüssiger Form,
- Gewerbliches oder landwirtschaftliches Schmutzwasser, soweit es nicht häuslichem Schmutzwasser vergleichbar ist,
- Chemikalien, Pharmazeutika, Mineralöle, Lösungsmittel,
- Kühlwasser,
- Grobstoffe in Form von Essensresten, Kunststoffen und Hygieneartikeln, Kaffeefiltertüten, Flaschenverschlüssen und anderen Haushaltsartikeln,
- Milch und Milchprodukte,
- Ablaufwasser von Schwimmbecken,
- größere Mengen Blut.

Bei Anfall größerer Mengen von Fetten oder pflanzlichen Ölen ist es zu empfehlen, die fetthaltigen Abwässer in einem der Kläranlage vorgeschalteten Fettabscheider vorzureinigen (Vorsicht: In den Fettabscheider dürfen keine Fäkalien eingeleitet werden!).

7. Betriebshinweise

Im Folgenden sind noch einmal einzelne Stoffe aufgeführt, welche nicht über die Kläranlage entsorgt werden dürfen:

Feste oder flüssige Stoffe, die nicht in den Ausguss bzw. in die Toilette gehören:	Was sie anrichten:	Wo sie gut aufgehoben sind:
Asche	Zersetzt sich nicht	Mülltonne
Chemikalien	Vergiftet Abwasser	Sammelstellen
Desinfektionsmittel	Tötet Bakterien	Nicht verwenden
Farben	vergiften das Abwasser	Sammelstelle des Landkreises
Frittierfett	Lagert sich in Rohren ab und führt zu Verstopfungen	Mülltonne
Heftpflaster	verstopft die Rohre	Mülltonne
Kippen	lagern sich in der Anlage ab	Mülltonne
Kondome	Verstopfungen	Mülltonne
Korken	lagern sich in der Anlage ab	Mülltonne
Medikamente	vergiften das Abwasser	Sammelstellen, Apotheken
Motoröl	vergiften das Abwasser	Sammelstellen, Tankstellen
Ölhaltige Abfälle	vergiften das Abwasser	Sammelstellen, Tankstellen
Pflanzenschutzmittel	vergiften das Abwasser	Sammelstelle des Landkreises
Pinselfreiniger	vergiften das Abwasser	Sammelstelle des Landkreises
Putzmittel, außer solche, die chlorfrei (umweltverträglich) sind	vergiften das Abwasser, zerfressen Rohrleitungen und Dichtungen	Sammelstelle des Landkreises
Rasierklingen	Verletzungsgefahr für die Arbeiter in Kanalisation und Klärwerk	Mülltonne
Rohrreiniger	Zerfressen Rohrleitungen und Dichtungen, vergiften das Abwasser	Sammelstelle des Landkreises
Schädlingsbekämpfungsmittel	vergiften das Abwasser	Sammelstelle des Landkreises
Slipereinlagen	Führen zu Verstopfungen, nicht zersetzbare Plastikfolien verschandeln Gewässer	Mülltonne
Speiseöl	führt zu Ablagerungen und Rohrverstopfungen	Sammelstellen des Landkreises
Speisereste	führen zu Verstopfungen, locken Ratten an	Mülltonne
Tapetenkleister	führt zu Verstopfungen	Sammelstelle des Landkreises
Textilien (z. B. Nylonstrümpfe, Putzlappen, Taschentücher etc.)	verstopfen Rohrleitungen, können ein Pumpwerk lahm legen	Altkleidersammlung
Verdünner	vergiftet das Abwasser	Sammelstelle des Landkreises
Vogelsand, Katzenstreu	führt zu Ablagerungen und Rohrverstopfungen	Mülltonne
Wattestäbchen	verstopfen die Anlage	Mülltonne
WC-Steine	vergiften das Abwasser	Nicht verwenden
Windeln	verstopfen die Rohre	Mülltonne
Zementwasser	lagert sich ab, verbetoniert	Fachfirma besorgen

8. EG-Übereinstimmungserklärung

8. EG-Übereinstimmungserklärung

Hersteller: Otto Graf GmbH
Carl-Zeiss-Straße 2-6
D-79331 Teningen

erklärt hiermit, dass das Produkt **one2clean** Kleinkläranlage den Bestimmungen folgender Richtlinien entspricht:

2006/42/EG Richtlinie des europäischen Parlaments und des Rates vom 17. Mai 2006 über Maschinen und zur Änderung der Richtlinie 95/16/EG.

2006/95/EG „Richtlinie des Rates betreffend elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen“

Folgende harmonisierte Normen wurden angewendet:

EN 60204-1 Elektrische Ausrüstung von Maschinen, Teil1: Allgemeine Anforderungen

EN ISO 13849-1 Sicherheit von Maschinen – Sicherheitsbezogene Teile von Steuerungen – Teil 1: Allgemeine Gestaltungsleitsätze

Diese EG-Konformitätserklärung verliert ihre Gültigkeit, wenn das Produkt ohne Zustimmung verändert wird.

Teningen, 22.02.14



Arne Schröder
(Teamleiter Produktmanagement)

9. Leistungserklärung

Leistungserklärung

one2clean

Nr. 008/Org.



1. Eindeutiger Kenncode des Produkttyps	Kleinkläranlage nach EN 12566-3
2. Typen-, Chargen- oder Seriennummer oder ein anderes Kennzeichen zur Identifikation des Bauprodukts gemäß Artikel 11 Absatz 4	one2clean 3-18 Einwohner Typengröße und Seriennummer am Typenschild des Schaltschranks
3. Vom Hersteller vorgesehener Verwendungszweck oder vorgesehene Verwendungszwecke des Bauprodukts gemäß der anwendbaren harmonisierten technischen Spezifikation	Reinigung von häuslichem Schmutzwasser für bis zu 150 L pro Einwohner und Tag mit einer Schmutzfracht von maximal 0,06 kg/BSB _s pro Einwohner und Tag
4. Name, eingetragener Handelsname oder eingetragene Marke und Kontaktanschrift des Herstellers gemäß Artikel 11 Absatz 5	Otto Graf GmbH Kunststoffzeugnisse Carl-Zeiss-Str. 2-6 79331 Teningen Deutschland
5. System oder Systeme zur Bewertung und Überprüfung der Leistungsbeständigkeit des Bauprodukts gemäß Anhang V	System 3
6. Die notifizierende Stelle PIA - Prüfinstitut für Abwassertechnik GmbH - NB 1739 - hat die Prüfung der Reinigungsleistung der Kläranlage durchgeführt. Die Behälter Carat S und Carat RS wurden auf Standsicherheit, Wasserdichtheit, Dauerhaftigkeit und Brandverhalten geprüft, siehe Nummer 7.	

7. Erklärte Leistung		
	Leistung	Prüfberichtsnummer
Reinigungsleistung	CSB: 94,2 % 43 mg/l BSB _s : 98,0 % 7 mg/l NH ₄ -N: 98,3 % 0,5 mg/l N _{ges} : 87,0 % 7,9 mg/l AFS: 96,3 % 14 mg/l	PIA2014-216B14.01.e
Wasserdichtheit	Bestanden	PIA2008-WD-AT0805-1027b (Carat S) PIA2016-WD-1509-1050.01 (Carat RS)
Standsicherheit	Bestanden	PIA2008-ST-AT0804-1019 (Carat S) PIA2016-ST-PIT-1509-1050.01 (Carat RS)
Dauerhaftigkeit	Bestanden	PIA2008-ST-AT0710-1020+DH (Carat S) PIA2016-DH-1509-1050.01 (Carat RS)
Brandverhalten	Klasse E	PIA2013-FR-1306-1039 (Carat S) PIA2016-RF-1509-1050.01 (Carat RS)

8. Die Leistung des Produktes gemäß den Nummern 1 und 2 entspricht der erklärten Leistung nach Nummer 7. Verantwortlich für die Erstellung dieser Leistungserklärung ist allein der Hersteller gemäß Nummer 4.

Unterzeichnet für den Hersteller und im Namen des Herstellers von:


 I.V. Arne Schröder
 Teamleiter Produktmanagement
 Teningen, 08.08.2016

10. Technische Daten der Steuerung

- speicherprogrammierbare Mikrocontrollersteuerung
- Sicherung (intern) T3,15A
- Weitbereichsnetzteil 100-240 VAC / 50-60 Hz
- Echtzeituhr mit Abweichung 5 min/a, akkugepuffert
- Logbuch, nullspannungssicher
- Kabelbruchüberwachung für Verdichter durch Messung der Ausgangsströme
- Betriebs-/Störmeldeanzeige mit LED (grün/rot)
- Betriebstemperaturbereich 0°C ...+55°C
- zul. Temperaturbereich ohne Betrieb -20°C ... +85°C
- relative Luftfeuchte 10...95%, keine Betauung
- Schutzgrad IP54
- 4-Tasten-Bedienfeld
- Anzeige: 2 Zeilen á 16 Zeichen mit Hintergrundbeleuchtung (blau)
- Ausgänge:
 - o Verdichter 230 VAC 50Hz (Standard),
 - o 2 Schrittmotoren/Magnetventile 24 VDC für Druckluftstrom

Log Book one2clean



It is essential that you observe the points described in these instructions. Failure to do so will invalidate all warranty claims. For all additional items ordered from GRAF, separate installation instructions will be provided in the transport packaging.

It is essential that you check the components for possible damage before installation.

You will receive separate instructions for assembling the system.

Contents

1. General Notes	21
2. Function of the Wastewater Treatment System	22
3. Start-up of the Control System	23
4. Operation of the Control System	24
5. Inspection and Maintenance	30
6. Fault Messages and Troubleshooting	32
7. Operating Notes	34
8. EC Declaration of Conformity	36
9. Declaration of Performance	37
10. Technical Data of the Control System	38

1. General Notes

Important tips for safe & long-lasting operation of the one2clean:

- The SBR system is designed for the treatment of all household sewage. The introduction of other wastewater, such as the wastewater from restaurants and/or business establishments, etc. is permitted if these were already known at the time of design of the system and were taken into account.
- Biocides, materials with a toxic effect or materials that are not biologically compatible must not enter the system, as these impede bacteria important for wastewater treatment and lead to biological process problems (detailed notes follow on the next pages).

It is imperative that you follow the operating and maintenance instructions for compliance with the regulatory requirements for cleaning. These instructions can be found on the following pages.

Furthermore, we ask that you carefully read and observe the following notes:

- The location of the control system for indoor installation must be a dry, well-ventilated room (basement or garage).
- If an outdoor control cabinet is used, this should be placed in as shaded place as possible to avoid overheating.
- At no time must the cabinet is be covered, in particular its air vents, and that it is freely accessible for maintenance.
- There must be a permanent power supply to the one2clean. Ensure that the control cabinet is adequately fused (16 A) and the power supply is fitted with isolator switch for repair & maintenance. Additional electrical components & consumers should not be using the same fuse as they can could power failure and interfere with one2clean operation.

2. Function of the Wastewater Treatment System

The one2clean small wastewater treatment system is fully biological and works according to the retention process with long-term aeration (sequencing batch reactor). The system is essentially made up of an aerobic stage. This stage is split into a rest area and an activation area. The chambers are connected to one another in the bottom section. During this process, therefore, all domestic sewage is immediately exposed to aerobic wastewater treatment. The entire system is aerated by compressed air being blown in and the sludge activated as a result of this biologically cleans the wastewater.

The coarse and floating solids contained in the wastewater are initially retained in the rest area by means of a baffle. The wastewater then passes through an overflow opening in the lower part of the container from the rest area into the activation area.

As the rest area is also aerated, the solids which remain behind are also degraded aerobically over time. Wastewater treatment is performed in the one2clean without pre-treatment, so that no anaerobic digestion processes can occur.

Operation of the treatment system is carried out via a microprocessor control system which controls the air compressor and air distribution.

The SBR process is a sequence of different steps that occur at set times in a sequence and takes place at least once a day.

Step 1: Aeration



The wastewater is subjected directly to aerobic treatment for a fixed amount of time. On the one hand the microorganisms (activated sludge) are supplied with the oxygen necessary for degradation; on the other hand mixing is achieved as a result of pressure aeration. The air diffuser of the system is supplied with ambient air by a compressor. The aeration is intermittent, so as to allow targeted wastewater treatment. Thus, different environmental conditions can be achieved.

Step 2: Settling



There is no aeration in the second phase. The activated sludge and the remaining settleable solids can now settle by gravity. A clear water zone is created at the top and a layer of mud forms at the bottom. Any floating sludge which might develop is located above the clear water zone.

Step 3: Clear Water Removal



The biologically treated wastewater (clear water) is extracted from the SBR stage. This is done by pumping compressed air according to the mammoth pump principle (air lift pump). The air lift is designed in such a way that no floating sludge which might develop is drained on the clear water layer. A minimum water level in the system is maintained without additional components.

After execution of the third Step, the cleaning process begins again with step 1.

Two cycles are performed per day. The individual adaptation of switching times is possible on the part of the maintenance company.

3. Start-up of the Control System

3. Start-up of the Control System

After the system is connected to the power supply, a short system test is run, during which time the LED light is red. The LED then becomes green when the start-up phase is completed.

During the system test, the notification "SYSTEM TEST ... OK", the program version, and serial number of the control system appear for a short time. Following this, the current operating status of the system is displayed. After the system test is complete, the date and the current time should be checked and adjusted if necessary (see Section 4.2.3).

After checking the date/time, a functional check of the system components must be carried out. This check can only be carried out if the necessary air hoses are connected. The check should be carried out via the menu point "manual mode" in the control system, which is intended for this purpose. The individual parts of the system are tested for functionality.

After a successful check, the system is reset to automatic mode.

In two-tank systems, the additional air distributor mounted on the control unit (see Fig. 1) should be set according to the installation situation. To do this, select "Manual operation" on the control unit (see section 4.2.2) and switch on aeration. While aeration is switched on, the valves must be set so that sufficient sludge is fed back and bubble formation is even in both tanks.



Figure 2: Air distributor with valves, 1. Sludge return 2. and 3. Aerator.

CAUTION: The clear water siphon only functions when the containers are filled.

If the date and time are not set correctly, operating faults will be stored with the incorrect time information.

4. Operation of the Control System

4. Operation of the Control System

The operation of the system is carried out via a microprocessor in the control unit. The microprocessor allows for the set-up of operating parameters, the display of operating conditions and the query of system parameters as well as the programming of working times through a specialist company.

Adjustments are made by scrolling through numerical values using the two arrow keys  . The settings are then confirmed by pressing the  button.

The individual dialogues can be terminated ahead of time by pressing  or will be terminated automatically after **2 minutes**.

The control system is broken down into the following display pages:

4. Basic level: Status of the cycle sequence with the elapsing remaining time, as well as the display of error messages.
5. Operator level: The operator can access the operator level by pressing the  button and enter operator-specific settings.
6. Service level: A password-protected service level can be accessed from the operator level using an additional code. This level is reserved for trained personnel. Here adjustments or changes can be made and diagnostic data is retrieved.

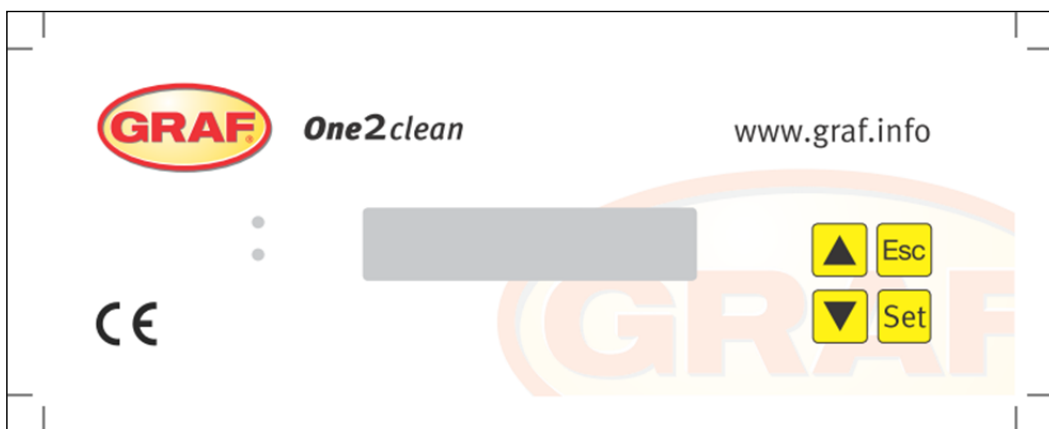


Figure 3: view of the operating unit

4.1 Control Programme

The control system switches the outputs for air compressors and stepper motors on a timer.

The timing is determined by the set sequence tables. A complete cleaning cycle is started for each start time in accordance with the selected sequence table.

By setting up holiday times in the operator level, the complete sequence of cleaning cycles can be suppressed for the set period of time. Only one holiday cycle with greatly reduced activity takes place at this time. During this time, no treated wastewater will be removed, as there should be no supply.

4. Operation of the Control System

4.1.1 Display of Operating Status

The operating status is indicated by the LEDs (green = operational / red = fault) and as text on the screen. In normal operating mode (aeration mode), the display appears as follows:

Aeration
Rest: 120:10min

In automatic mode, the liquid crystal display shows the current work phase and the remaining time left in this phase.

If a fault occurs, the red LED is turned on. A message indicating which component is faulty appears in the liquid crystal display (e.g. Fault Compressor 0.0A).

4.1.2 The following work phases are displayed

Display	Process performed
Denitrification	Y3 valve (plug X1.1) is actuated intermittently; the activated sludge is briefly mixed with the wastewater. This is followed by long pauses (response times).
Ventilation	Y3 valve (plug X1.1) is actuated; the system is aerated in intervals over a long period of time.
Sedimentation phase	No valves are actuated, the activated sludge settles in the system.
Activity phase	Y4 valve (plug X1.2) is actuated; the clear water is pumped into the drain.
Cycle pause/ holiday mode	Y3 valve (plug X1.1) is actuated; the system is aerated in intervals (considerably less than in the aeration phase).
Rest: XXX:XXmin	Display of remaining time.

Symbol	Key assignment	Function
	Enter key	Selection of operating mode, confirmation of entries
	Scroll	Display of operating modes and queries Programming of the system by entering figures
	Acknowledgement	Acknowledgement of entries without saving Acknowledgement of fault messages

4. Operation of the Control System

4.2 Operating the Control System

You can start different queries from the automatic mode.

You can access the first operating level by pressing . You can now call up the individual queries using the arrow keys   and then pressing  :

Display	Meaning
Operating mode Remaining time	Remaining time in current work phase
Operating hours	Display of the operating hours of the valve and compressor
Manual operation	Manual control of the valve
Date Time	Current time, day and date. Can be set using 
Holiday mode	Holiday mode set-up (max. 90 days)
Faults	Operational faults which occur are stored here and can be read. It is possible to switch between the error message and the corresponding date using  and 
Settings	The current settings can be viewed using the arrow keys
Service menu	For qualified personnel

4.2.1 Operating Hours Query

Press the  button. On the screen will appear:

Operating hours
meter reading

By pressing  again, the operating hours for the valves and the compressor can be displayed in sequence using the arrow keys   .

Pressing  once will take you back to the display “display operating hours”. You can access the “manual mode” menu by pressing  .

→ **Note:** If you do not press any buttons for a period of 10 minutes, normal operation will begin automatically.

4. Operation of the Control System

4.2.2 Manual Control of the Valve using “Manual Operation”

During checks, each valve should run for at least 5 seconds, as the monitoring the current consumption of the valves takes some time before any faults are detected.

In automatic mode, first press  then the arrow key  until the following is displayed on the screen:

Manual operation

By pressing on the  button again, you will receive the following message:

Aeration OFF

Pressing  allows you to turn the selected programme on and off.

The other programs can be selected using the arrow keys .

Pressing  once will take you back to the display “manual mode”.

4.2.3 Set Date/Time

Press  and then the arrow keys  until the following is displayed on the screen (example):

19-12-2007 Mon
20:15:56

By pressing , the time and date can then be set using the arrow keys  .

To confirm the correction, you must press  each time.

Pressing  once will take you to the next display in holiday mode.

A correctly set system clock and date display is absolutely mandatory in order to record the hours of operation and so that any faults can be traced. There is no automatic change from summer to winter time.

NOTE: If you do not press any buttons for a period of 10 minutes, normal operation will begin automatically.

4. Operation of the Control System

4.2.4 Setting-up Holiday Mode

NOTE: Holiday mode results in the reduced operation of the wastewater treatment system. It should only be applied when no wastewater is introduced into the wastewater treatment system during the selected time period. Wastewater that passes into the system during the holiday mode period will not be cleaned. Holiday mode is switched on and off automatically for the data you have entered.

Press , then press the arrow buttons   until the following appears on the screen:

Vacation oper.

Press  again to release the input of holiday dates:

Start: YYYY-MM-DD
End: YYYY-MM-DD

Start of holiday:

The start of holiday mode is entered in the format YYYY-MM-DD by pressing  . To switch between the different settings, the  button must be pressed in each case.

End of holiday:

As with for the start of the holiday, the end of holiday mode is entered in the year, month and day format YYYY-MM-DD by pressing  .

Press the  button to save the input data for holiday mode and to exit this function.

Pressing  returns you to the automatic mode display.

NOTE: If you do not press any buttons for a period of 2 minutes, normal operation will begin automatically without the date that you have just entered being saved.

4. Operation of the Control System

4.2.5 Old Faults

The control system stores all past fault messages and the operation of the control system via the “manual mode” function. Past fault messages with date and time can be read under the menu item “Old faults”. The individual messages can be accessed using the arrow keys. You can exit the menu item by pressing .

Faults are indicated as encoding, in order of their appearance, starting with number 0 (latest signal).

Coding	Meaning
1	Power failure (system is currentless)
2	Net is back (system regains power)
3	Compressor has over-current
4	Compressor current supply too low
5	Manual operation

The faults number 2 (net is back) and number 5 (manual operation) are no faults. They will be registered for a better temporal localization of possibly occurring faults or rather monitoring of manual activities on the control system.

4.2.6 Display Settings

This menu item allows the current control system settings to be seen. It is not possible to change these settings. This menu item is used to analyse the settings without making changes. The individual settings can be called up using the arrow keys  . You can exit the menu item by pressing .

4.2.7 Service Menu

Operating parameters can be changed in the service menu. Access is protected with a code. This second maintenance level is reserved exclusively for qualified specialist personnel only!

Any access to the control system settings by unauthorised persons will cause the warranty to expire!

5. Inspection and Maintenance

5.1 Obligations of the Operator

The system must always be turned on. The operator is obliged to ensure the fault-free operation of the system. Almost all operational faults lead to a deterioration of the system's cleaning performance. These should therefore be detected at an early stage and eliminated immediately by you or a qualified service technician.

5.1.1 Daily checks

The system should be checked daily for correct operation. The system is operating correctly when the operating control is lit up green and no warning signal can be heard.

5.1.2 Monthly checks

- Visual inspection for any sludge output, turbidity or discoloration in the flow
- Check inflows and outflows for blockages (visual inspection)
- Read the operating hours counter on the air compressor (total operating hours), the ventilation (Y3 valve) and the clear water run-off (Y4 valve) and record in the operating log

5.2 Maintenance by a Specialist Company

Maintenance is carried out by a specialist company (experts) at least twice a year (approximately every 6 months). The time intervals and tasks specified by the local water authority in the consent permit under water laws also apply. For this purpose, the system owner must complete a maintenance contract with a qualified specialist.

The following tasks should be carried out in relation to maintenance:

- Inspection of the log book with determination of the regular operation (target-actual comparison),
- Check the air filter of the air compressor,
- Maintenance of the air compressor according to the manufacturer's instructions,
- Functional check of the air compressor and stepper motors,
- Carry out general cleaning work, e.g. removal of deposits,
- Check for adequate ventilation,
- Examination of activation tank:
 - Oxygen concentration ($O_2/l > 2 \text{ mg}$), adjust the operating time of the compressor if necessary,
 - Sludge volume ($< 900 \text{ ml/l}$),

If the sludge volume is greater than 900 ml/l, the sludge must be removed.

Maintenance tasks carried out, any damage detected or repairs made as well as other instances should be summarised by the maintenance company in a maintenance report.

5. Inspection and Maintenance

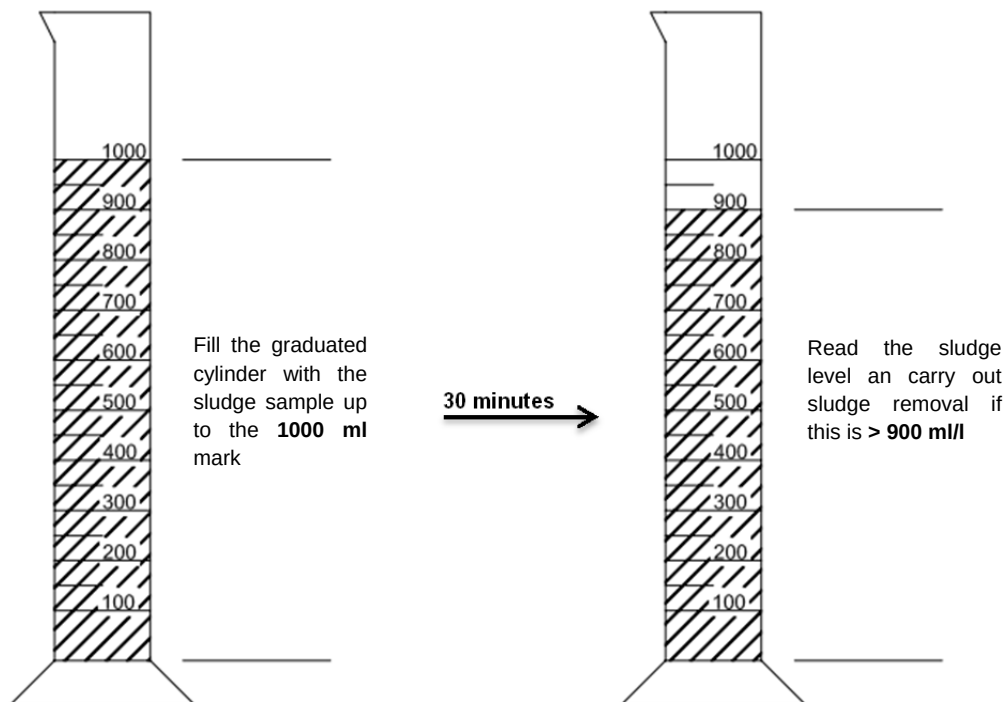
5.3 Determination of Sludge Removal

In order to determine the need for sludge removal in the wastewater treatment system, a settling test should be carried out at maintenance intervals. For this settling test, the SV30 is measured. The SV30 is the sludge volume occupied by 1000 ml of activated sludge after a settling period of 30 minutes. It is a measure of the amount of sludge present in the wastewater treatment system.

Measurement of the SV30 is carried out in a 1000 ml graduated cylinder.

The following points must be observed during this measurement:

6. Turn ventilation on - if not active - and allow to mix for a short time
7. Submerge the scoop into the tank and remove sludge sample
8. Fill the graduated cylinder with the sludge sample up to the 1000 ml mark
9. Let the cylinder containing the sample stand in a place free from vibrations for 30 minutes
10. Read the sludge level and carry out sludge removal if this is $> 900 \text{ ml/l}$
11. After emptying the tank have to be filled up with fresh water again



5.4 Sludge Removal

Removing sludge from the wastewater treatment system should be carried out according to the following points:

7. Remove the cover
8. Remove the deposits on the water surface and on all visible surfaces (baffle, sample container, siphon)
9. Wash down the visible surfaces
10. Insert the suction hose into the wastewater treatment tank until it reaches the floor
(CAUTION: air admittance valves on the ground must not be damaged!)
11. Aspirate until about 30 cm of wastewater and sludge remain in the wastewater treatment system

6. Fault Messages and Troubleshooting

6. Fault Messages and Troubleshooting

Technical problems of system operation (failure of a unit) are visually displayed.

6.1 System Behaviour after switching off the Power Supply

If the system is disconnected from the mains (e.g. power failure), the control program and the counted operating hours are retained due to the memory of the control system. The red LED will light up. When the system is supplied with power again, it will self-start.

NOTE: If the system is disconnected from the mains for more than 24 hours, cleaning of the existing wastewater is not or is only possible to a very limited extent.

6.2 Fault Message in the Display

Faults are shown as text or as numbered codes on the liquid crystal display. The operating control lamp then lights up red.

The numbered fault codes are explained below:

6. Power failure (system is de-energised)
7. Power returned (system is supplied with power again)
8. Compressor has overcurrent
9. Compressor power supply too low
10. Manual operation

The displays no. 2 (power returned) and no. 5 (manual mode) are not faults in the proper sense. These are only registered as fault messages for better time limitations of any faults that occur and for monitoring manual activities on the control system.

Table 2: **Fault Causes and Troubleshooting**

Display	Possible cause	Remedy
Mains failure No display, no light	• Power failure • System turned off • There is no voltage at the control cabinet.	• Check the power supply to the system and to the control system • Turn system back on • Check supply to the control cabinet • Wait for resumption of power supply
No display, light is green		• Turn system off and back on again after 10 seconds
Mains returned	• Power available again	
Set the clock	• Internal clock/date not set	• Set date and time via menu item
Compressor **overcurrent**	• Short-circuit	• Check supply to the control cabinet
Compressor **current too low**	• Compressor does not work / is not receiving power	• Check the compressor in manual mode
Manual operation	• System was activated manually in manual mode	

6. Fault Messages and Troubleshooting

6.3 Unusual Water Levels - Fixing a Fault

Observation	Possible cause	Remedy
The water level in the activation tank is unusually high	• System is running in holiday mode • System runs continually in cycle pause • Control system settings are incorrect • The drain siphon is clogged • The air hose to the drain siphon is leaking • System has been flooded from external water source and not allowing water to drain from the system • Control system is defective	• End holiday mode • Have the control system settings checked by the maintenance technician • Allow tank to be pumped out and clean siphons • Seal hose connections • Wait out flooding • Get in touch with maintenance company
The system smells, the treated water is cloudy or discoloured	• Too little air is entering the system • Single-sided ventilation due to defective air admittance valves	• Have service company increase ventilation time • Check the ventilation, get in touch with maintenance company
Ventilation is one-sided or large air bubbles appear at points	• Membrane unit is defective • Seal leaky air admittance valves	• Get in touch with maintenance company • Get in touch with maintenance company

7. Operating Notes

Essentially, the system should only be supplied with materials that correspond to domestic wastewater in their characteristics.

Biocides, materials with a toxic effect or materials that are not biologically compatible or degradable must not enter the system, as these lead to biological process problems. The following, in particular, should not be introduced into the system:

- Rainwater from roofs and courtyards,
- Extraneous water (e.g. drain water)
- Residues from livestock in solid or liquid form,
- Industrial or agricultural wastewater, as far as it is not comparable to domestic wastewater,
- Chemicals, pharmaceuticals , mineral oils, solvents,
- Cooling water,
- Coarse materials in the form of food scraps, plastics and hygiene products, face wipes, coffee filter papers, bottle caps and other household items,
- Milk and dairy products
- Drain water from swimming pools,
- Large amounts of blood.

In the case of large amounts of fats or vegetable oils, it is recommended that the fatty wastewater is pre-treated in one of the grease traps upstream of the wastewater treatment system (Caution: No faeces may be introduced into the grease trap!).

7. Operating Notes

The following is a list of individual substances which must not be disposed of via the wastewater treatment system:

Solid or liquid substances that do not belong in the sink or in the toilet:	What it does:	Where it should go:
Ash	Does not decompose	Dustbin
Chemicals	Contaminates wastewater	District collection point
Disinfectants	Kills bacteria	Do not use
Paints	Contaminates wastewater	District collection point
Frying fat	Accumulates in pipes and leads to blockages	Dustbin
Adhesive plasters	Clogs pipes	Dustbin
Cigarette ends	Accumulates in the system	Dustbin
Condoms	Causes blockages	Dustbin
Corks	Accumulates in the system	Dustbin
Medication	Contaminates wastewater	Pharmacy
Engine oil	Contaminates wastewater	District collection point
Oily waste	Contaminates wastewater	District collection point
Plant protection products	Contaminates wastewater	District collection point
Paintbrush cleaner	Contaminates wastewater	District collection point
Cleaning agents, except those which are chlorine-free (environmentally friendly)	Contaminates wastewater, corrodes pipes and seals	District collection point
Razorblades	Causes risk of injury for workers in sewers and wastewater treatment systems	Dustbin
Drain cleaner	Corrodes pipes and seals, contaminates wastewater	District collection point
Pesticides	Contaminates wastewater	District collection point
Panty liners/Sanitary towels	Leads to blockages, non-degradable plastic film spoil water	Dustbin
Cooking oil	Leads to deposits and pipe blockages	District collection point
Food leftovers	Lead to blockages, attracts rats	Dustbin
Wallpaper paste	Leads to blockages	District collection point
Textiles (e.g. nylon tights, cloths, handkerchiefs, etc.)	Clogs pipelines, can cripple a pumping station	Charity shop
Thinner	Contaminates wastewater	District collection point
Bird sand, cat litter	Leads to deposits and pipe blockages	Dustbin
Cotton buds/Face wipes	Clogs the system	Dustbin
Toilet blocks	Contaminates wastewater	Do not use
Nappies	Clogs pipes	Dustbin
Cement water	Creates deposits, becomes concrete	Send to a specialist company

8. EC Declaration of Conformity

8. EC Declaration of Conformity

Manufacturer: Otto Graf GmbH
Carl-Zeiss-Straße 2-6
D-79331 Teningen

hereby declares that the product **one2clean** small sewage treatment system complies with the following Directives:

2006/42/EC Directive of the European Parliament and of the Council, dated 17 May 2006, on machinery, and amending Directive 95/16/EC.

2006/95/EC "Directive of the Council relating to electrical equipment designed for use within certain voltage limits"

The following harmonised standards have been applied:

EN 60204-1 Electrical equipment of machines Part 1: General requirements

EN ISO 13849-1 Safety of machines - Safety-related parts of control systems - Part 1: General principles for design

This EC declaration of conformity becomes invalid if the product is modified without consent.

Teningen, 22.02.14



Arne Schröder
(Product Management Team Leader)

9. Declaration of Performance

9. Declaration of Performance

Declaration of performance one2clean

Nr. 008/Translation



1. Unique identification code of the product-type	EN 12566-3: Small wastewater treatment system
2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4)	one2clean 3-18 Inhabitants Type size and serial number on control cabinet type plate
3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer	Cleaning domestic wastewater in a volume of up to 150 l per inhabitant and day with a maximum pollution load of 0.06 kg/BOD ₅ per inhabitant and day
4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5)	Otto Graf GmbH Kunststoffzeugnisse Carl-Zeiss-Str. 2-6 79331 Teningen Germany
5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V	System 3
6. The notifying authority PIA (Prüfinstitut für Abwassertechnik GmbH) - NB 1739 - tested the cleaning performance of the wastewater treatment system. The Carat S-and Carat RS tanks were tested for stability, leaks, durability and fire behaviour, see number 7.	

7. Declared performance		
	Performance	Test report No.
Treatment efficiency	COD: 94,2 % 43 mg/l BOD ₅ : 98,0 % 7 mg/l NH ₄ -N: 98,3 % 0,5 mg/l N _{tot} : 87,0 % 7,9 mg/l SS: 98,3 % 14 mg/l	PIA2014-216B14.01.e
Watertightness	Passed	PIA2008-WD-AT0805-1027b (Carat S) PIA2016-WD-1509-1050.01 (Carat RS)
Crushing resistance	Passed	PIA2008-ST-AT0804-1019 (Carat S) PIA2016-ST-PIT-1509-1050.01 (Carat RS)
Durability	Passed	PIA2008-ST-AT0710-1020+DH (Carat S) PIA2016-DH-1509-1050.01 (Carat RS)
Reaction to fire	Class E	PIA2013-FR-1306-1039 (Carat S) PIA2016-RF-1509-1050.01 (Carat RS)

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.
This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

i.V. Arne Schröder
Team leader, product management

Teningen, 08.08.2016

10. Technical Data of the Control System

- Programmable logic microcontroller
- T3,15A fuse (internal)
- Wide-range 100-240 VAC/50-60 Hz power supply
- Real-time clock with 5 min/a deviation, battery back-up
- Logbook, non-volatile
- Cable break monitoring for compressors by measuring output currents
- Operating/error message display with LED (green/red)
- Operating temperature range: 0°C to +55°C
- Permissible temperature range outside of operation: -20°C to +85°C
- relative humidity: 10% to 95%, no condensation
- Degree of protection IP54, front side (with properly glued front foil)
- 4-key control panel
- Display: 2 lines of 16 characters with backlighting (blue)
- Outputs:
 - o 230 VAC 50Hz compressor (standard),
 - o 2x 24 VDC step motors/solenoid valves for compressed air flow

Manual de instrucciones one2clean



Se deberá cumplir necesariamente con los puntos descritos en este manual. El incumplimiento de dichos puntos anulará cualquier reclamación de la garantía. Recibirá, por separado en el embalaje de transporte, instrucciones de montaje adjuntas para todos los artículos relacionados con GRAF.

Antes de la instalación en la fosa, se deberá llevar a cabo una revisión de las piezas en busca de posibles daños.

Recibirá por separado un manual de instrucciones para el montaje de la instalación.

Índice

1.	Información general	40
2.	Funcionamiento de la depuradora	40
3.	Puesta en marcha del cuadro de control	42
4.	Manejo del control	43
5.	Manejo y mantenimiento	49
6.	Mensajes de error y solución de fallos	51
7.	Indicaciones de funcionamiento	53
8.	Declaración CE de conformidad	55
9.	Declaración de rendimiento	56
10.	Datos técnicos del cuadro de control	57

1. Información general

A continuación, nos gustaría darle algunas indicaciones importantes para un funcionamiento duradero y seguro.

- La instalación SBR está diseñada para la depuración de aguas residuales domésticas. Por lo tanto, la introducción de cualquier otro tipo de agua, por ejemplo, aguas residuales de restaurantes y/o industria etc., estará permitida en caso de que éstas ya se conocieran, se hayan tenido en cuenta en el momento del diseño de esta instalación y se hayan tenido en cuenta la instalación de equipos previos a la depuradora (separador de grasas, reja de desbaste, etc...)
- Biocidas, sustancias tóxicas o no compatibles biológicamente no deben entrar a la depuradora, ya que dañarían las bacterias necesarias para la depuración de aguas residuales y causarían problemas biológicos en el proceso (en las próximas páginas se incluirán indicaciones detalladas).

Para el cumplimiento de los requisitos oficiales de depuración, el funcionamiento deberá llevarse a cabo de acuerdo a nuestras instrucciones de funcionamiento y mantenimiento. En las siguientes páginas encontrará dichas instrucciones.

Además, le rogamos que lea detenidamente y tenga en cuenta las siguientes indicaciones:

- La ubicación del control en instalación interior debe estar en una habitación seca y bien ventilada (sótano o garaje).
- En caso de que se utilice un armario exterior, éste deberá estar en un lugar protegido de la luz solar para evitar el sobrecalentamiento.
- Deberá garantizarse de manera permanente que el armario y especialmente sus aberturas de ventilación no estén cubiertas y sean accesibles para los trabajos de mantenimiento.
- El suministro eléctrico deberá estar permanentemente garantizado. Por favor, asegúrese de que el armario de control esté lo suficientemente protegido (16 A). Se recomienda utilizar una línea de corriente específica para la depuradora, sin que se comparta con cualquier otro dispositivo.

2. Funcionamiento de la depuradora

La estación depuradora one2clean es totalmente biológica y funciona mediante procesos de embalsamiento con aireación prolongada (Sequencing Batch Reactor). La instalación consta básicamente de un medio aerobio. Este medio está dividido en una zona de reposo y una zona de reacción conectadas en la parte inferior. Con este procedimiento, todas las aguas residuales domésticas reciben directamente un tratamiento aeróbico. Mediante la inyección de aire a presión se produce la ventilación de toda la instalación y el lodo activado generado limpia el agua residual de forma biológica.

En primer lugar, los lodos flotantes y las partículas gruesas contenidas en el agua residual se retienen en la zona de reposo con ayuda de una pared divisoria. El agua residual pasa entonces a través de una abertura de desbordamiento en la parte inferior del depósito de la zona de reposo hasta la zona de reacción.

2. Funcionamiento de la depuradora

Dado que la zona de reposo se ventila, con el tiempo las sustancias allí retenidas se degradan aeróbicamente.

El tratamiento de aguas residuales se lleva a cabo en el one2clean sin tratamiento primario, de manera que no puede producirse ningún proceso de descomposición anaeróbica.

La depuradora se maneja a través de un control con microprocesador que controla el compresor de aire y la distribución del mismo.

El proceso SBR es una serie de distintos pasos de trabajo secuenciales en el tiempo y que se llevan a cabo al menos una vez al día.

Paso de trabajo 1: aireación



En la primera fase, el agua residual se somete directamente a un tratamiento aeróbico durante un tiempo fijo. De este modo, por un lado se suministra a los microorganismos (lodos activados) el oxígeno necesario para la descomposición y, por otro lado, se consigue una mezcla a través de la aireación presurizada. El dispositivo de aireación de la instalación se nutre del aire del entorno por medio de un compresor. La aireación se lleva a cabo de manera intermitente, permitiendo así una depuración de aguas residuales específica. De este modo pueden conseguirse distintas condiciones ambientales.



Paso de trabajo 2: sedimentación

En la segunda fase no se lleva a cabo aireación alguna. El lodo activado y el resto de sustancias sedimentables se sedimentan por efecto de la gravedad. En la parte superior se crea una zona de agua depurada y en el fondo una capa de lodo. Los posibles lodos flotantes se encuentran sobre la zona de agua depurada.



Paso de trabajo 3: extracción del agua depurada

En esta fase, el agua biológicamente depurada (agua limpia) de la fase SBR se extrae. Este proceso de bombeo se lleva a cabo por medio de aire comprimido según el principio air lift (de elevación por aire comprimido). La bomba de elevación por aire comprimido está construida de tal manera que el lodo flotante que pueda haber sobre la capa de agua depurada no se bombea. Se mantiene un nivel del agua mínimo en la instalación sin necesidad de otros componentes.

Tras el tercer paso de trabajo, el proceso de depuración vuelve a comenzar con el paso 1.

Al día se llevan a cabo 2 ciclos. La empresa de mantenimiento podrá adaptar individualmente los tiempos de activación, previo aviso al Departamento Técnico de GRAF para su aprobación.

3. Puesta en marcha del cuadro de control

3. Puesta en marcha del cuadro de control

Una vez que la instalación se haya conectado a la red eléctrica, se llevará a cabo una breve prueba del sistema durante la cual el LED brillará en color rojo. Finalmente, el LED pasará a verde y la fase inicial habrá terminado.

Durante la prueba del sistema, en un periodo corto de tiempo se mostrará en pantalla «PRUEBA DEL SISTEMA... OK», la versión del programa y el número de serie del control. A continuación se mostrará el estado de funcionamiento de la instalación en ese momento. Tras la finalización de la prueba del sistema deberá comprobarse la fecha y la hora actuales y, en caso necesario, ajustarse (véase sección 4.2.3).

Junto con la comprobación de la fecha/hora, deberá realizarse una comprobación del funcionamiento de los componentes de la instalación. Esta comprobación solo podrá llevarse a cabo si las mangueras de aire necesarias están conectadas. La comprobación deberá realizarse a través del punto del menú «Modo manual» del control. Entonces podrá revisarse el funcionamiento de los componentes individuales de la instalación.

Tras una comprobación satisfactoria, el sistema deberá restablecerse al modo automático.

En las instalaciones de dos depósitos hay que ajustar el distribuidor de aire adicional montado en el cuadro de control (ver la ilustración 1) de acuerdo con las condiciones de montaje de la depuradora. Para este fin hay que seleccionar en el control el punto del menú "Modo manual" (ver el apartado 4.2.2) y conectar la aireación. Estando la aireación conectada hay que ajustar las válvulas de tal forma que se recircule suficiente lodo y que suba la misma cantidad de burbujas en los dos depósitos.



Ilustración 4: distribuidor de aire con válvulas, 1 recirculación del lodo, 2 y 3 aireador.

ATENCIÓN: Solo será posible comprobar el funcionamiento del elevador de agua depurada si la depuradora está llena.

En caso de que la fecha y la hora no se ajusten correctamente, los fallos de funcionamiento se registrarán con una fecha y hora incorrectas.

4. Manejo del control

4. Manejo del control

El manejo de la instalación se lleva a cabo a través de un microprocesador en la unidad de control. El microprocesador permite el ajuste de los parámetros de funcionamiento, la visualización de los estados de funcionamiento y la consulta de parámetros de la instalación, así como la programación de los periodos de funcionamiento por medio de un especialista.

El ajuste se realiza desplazándose por distintos valores numéricos a través de ambas teclas de flechas



. La confirmación del ajuste se realiza presionando la tecla



Los diálogos individuales pueden cerrarse antes de tiempo presionando **Esc** o se cerrarán automáticamente tras **2 minutos**.

El control se divide en las siguientes páginas:

7. Nivel básico: estado del ciclo con el tiempo restante y visualización de mensajes de error.
8. Nivel del operario: presionando la tecla **Set**, el operario podrá acceder al nivel del operario y llevar a cabo ajustes específicos.
9. Nivel de servicio: por medio de un código adicional, desde el nivel del operario puede accederse a un nivel de servicio protegido con contraseña. Este nivel está reservado a personal capacitado. En él pueden realizarse ajustes y modificaciones, así como acceder a datos de diagnóstico.

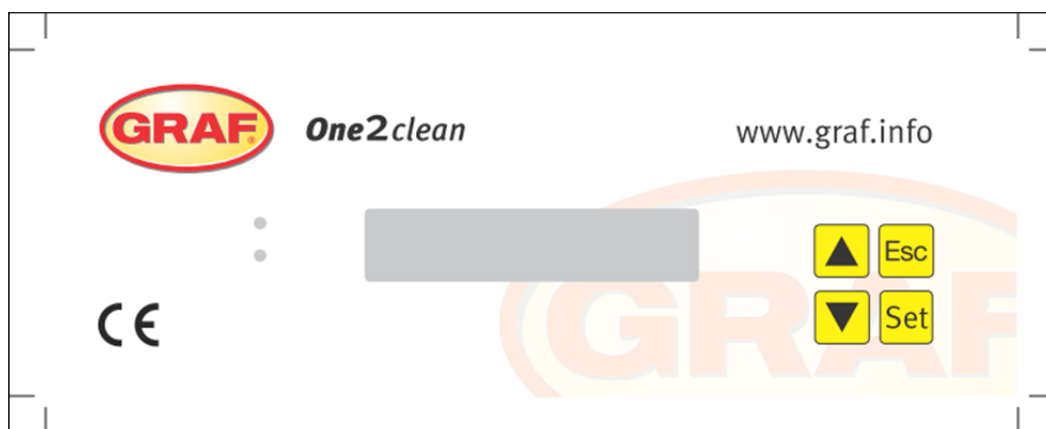


Fig. 5: Vista de la unidad de control

4.1 Programa de control

El control acciona de manera programada las salidas para el compresor de aire y las electroválvulas.

El transcurso temporal se fija por medio de las tablas secuenciales adjuntas. El ciclo completo de depuración comenzará en el momento de inicio correspondiente de acuerdo a la tabla seleccionada.

Al configurar los periodos de vacaciones en el nivel del operario, todo el transcurso del ciclo de depuración puede ligarse al periodo configurado. Durante este periodo solo tendrá lugar un ciclo de vacaciones con actividad significativamente reducida. Durante este periodo no se llevará a cabo ninguna extracción de agua residual, ya que no debería existir entrada alguna de agua.

4. Manejo del control

4.1.1 Visualización del estado de funcionamiento

El estado de funcionamiento de la instalación se mostrará en la pantalla por medio de los diodos LED (**verde** = funcionamiento / **rojo** = fallo) y en forma de texto.

En modo de funcionamiento normal (modo de aireación) la pantalla tiene el siguiente aspecto:

Presurizando

Rest: 120:10min

En modo automático, la pantalla LCD muestra la fase actual de trabajo y el tiempo restante de dicho paso de trabajo.

En caso de que ocurra un fallo, el LED rojo se enciende. En la pantalla LCD se muestra el mensaje con el componente que está fallando (por ejemplo, Fallo Compresor 0,0A).

4.1.2 Se mostrarán las siguientes fases de trabajo

Visualización	Proceso realizado
Desnitrificación	La válvula Y3 (toma X1.1) se activa intermitentemente, el lodo activado se mezcla brevemente con el agua residual. Le siguen pausas prolongadas (tiempos de reacción).
Aireación	La válvula Y3 (toma X1.1) se activa, la instalación se airea en intervalos durante un largo periodo de tiempo.
Fase de sedimentación	No se activa ninguna válvula, el lodo activado se sedimenta en la instalación.
Fase de extracción	La válvula Y4 (toma X1.2) se activa, el agua limpia se bombea a la salida.
Pausa del ciclo/ Modo de vacaciones	La válvula Y3 (toma X1.1) se activa, la instalación se airea en intervalos (significativamente más bajos que en la fase «Aireación»).
Rest: XXX:XXmin	Visualización del tiempo restante.

Símbolo	Asignación de teclas	Función
	Tecla de entrada	Selección del modo de funcionamiento, confirmación de entradas
	Hojas	Visualización de los modos de funcionamiento y consultas Programación de la instalación por medio de la introducción de números
	Validación	Validación de entradas sin almacenamiento Validación de mensajes de error

4. Manejo del control

4.2 Manejo del control

A partir del modo automático podrán realizar distintas consultas.

Presionando  accederá al primer nivel de menu. Con las flechas   y presionando a continuación , podrá acceder a las siguientes consultas:

Visualización	Significado
Estado de funcionamiento Tiempo restante	Tiempo restante de la fase de trabajo actual
Horas de funcionamiento	Visualización de las horas de funcionamiento de las válvulas y del compresor
Modo manual	Activación manual de las válvulas
Fecha Hora	Hora, día y fecha actuales Pueden ajustarse por medio de 
Modo de vacaciones	Configuración del modo de vacaciones (máx. 90 días)
Fallos	Los fallos de funcionamiento que ocurran se almacenarán aquí y podrán consultarse. A través de  o  , se podrá cambiar entre el mensaje de error y la fecha correspondiente
Ajustes	Por medio de las flechas podrá ver los ajustes actuales
Menú de servicio	Para personal especializado

4.2.1 Consulta de las horas de funcionamiento

Presione la tecla . En la pantalla se mostrará:

Horas de marcha
contador

Volviendo a presionar la tecla  podrán mostrarse sucesivamente las horas de funcionamiento de las válvulas y el compresor por medio de las flechas  .

Presionando una vez la tecla , volverá a acceder a la pantalla «Mostrar horas de funcionamiento».

Presionando  accederá al menú «Modo manual».

→**Advertencia:** En caso de que no presione ninguna tecla durante 10 minutos, se pasará automáticamente al modo normal.

4. Manejo del control

4.2.2 Activación manual de las válvulas a través de «Modo manual»

Durante la comprobación, cada válvula debe funcionar durante al menos 5 segundos, ya que la comprobación del consumo de corriente de la válvula requiere cierto tiempo antes de que se detecte un posible fallo.

En modo automático, presione primero , a continuación la flecha  hasta que en la pantalla se muestre lo siguiente:

marcha manual

Volviendo a presionar la tecla  se mostrará lo siguiente:

Presurizando
OFF

Presionando la tecla  podrá conectar y desconectar el programa seleccionado.

Con las flechas  podrán seleccionarse el resto de programas.

Presionando una vez , volverá a acceder a la pantalla «Modo manual».

4.2.3 Ajuste de la fecha/hora

Presione primero , y, a continuación la flecha  hasta que en la pantalla se muestre lo siguiente (ejemplo):

19-12-2007 Lu
20:15:56

Presionando  podrá ajustarse la hora y la fecha con las flechas  .

Para confirmar la corrección deberá presionar .

Presionando una vez , avanzará hacia el modo de vacaciones.

La visualización de la hora y la fecha correctas de la instalación es fundamental para poder registrar las horas de funcionamiento y los posibles fallos. No se produce una desactivación automática de los periodos de verano e invierno.

ADVERTENCIA: En caso de que no presione ninguna tecla durante 10 minutos, se pasará automáticamente al modo normal.

4. Manejo del control

4.2.4 Ajuste del modo de vacaciones

ADVERTENCIA: El modo de vacaciones ofrece un funcionamiento reducido de la depuradora. Por lo tanto, solo deberá utilizarse en caso de que no vaya a introducirse agua residual en la depuradora durante el periodo de tiempo seleccionado. El agua residual que acceda a la instalación durante el funcionamiento de vacaciones no se depurará. La activación y desactivación del modo de vacaciones se realiza automáticamente en las fechas que usted haya introducido.

Presione , a continuación pulse las flechas   hasta que en la pantalla se muestre lo siguiente:

Marcha de
vacaci

Volviendo a presionar  se habilitará la entrada de las fechas de vacaciones:

Inici: AAAA-MM-DD
Fin: AAAA-MM-DD

Inicio de las vacaciones:

El inicio del modo de vacaciones se introduce presionando   en formato AAAA-MM-DD. Para modificar los ajustes individuales, deberá presionarse la tecla .

Final de las vacaciones:

Al igual que para el inicio de las vacaciones, presionando   se introducirá también el año, mes y día en formato AAAA-MM-DD para el final de las vacaciones.

Con la tecla  almacenará la entrada de datos para el modo de vacaciones y abandonará esta función.

Presionando  volverá a la pantalla del modo automático.

ADVERTENCIA: En caso de que no presione ninguna tecla durante 2 minutos, se pasará automáticamente al modo normal sin almacenar las fechas introducidas anteriormente.

4. Manejo del control

4.2.5 Fallos antiguos

El control almacena todos los mensajes de error pasados y el manejo del control a través de la función «Modo manual». A través del punto del menú «Fallos antiguos» pueden leerse los mensajes de error pasados con su fecha y hora. Podrá acceder a los mensajes individuales por medio de las teclas de flecha.

A través de  podrá abandonar el punto del menú.

Los fallos se registran a medida que ocurren, comenzando con el número cero (registro del fallo actual).

Código/Fallo	Significado
1	Interrupción en el suministro de energía
2	Reanudación del suministro de energía.
3	Pico de tensión/eléctricidad en el compresor.
4	Suministro de energía insuficiente para el compresor.
5	Modo manual

Los códigos Nr. 2 (Reanudación del suministro de energía) y Nr. 5 (modo manual) no representan fallos; los mismos se almacenan para su información.

4.2.6 Mostrar ajustes

Bajo este punto del menú pueden visualizarse los ajustes actuales del control. No será posible realizar modificaciones de estos ajustes. Este punto del menú se utilizar para analizar los ajustes sin realizar modificación alguna de los mismos. Podrá acceder a los ajustes individuales por medio de las teclas .

 . A través de  podrá abandonar el punto del menú.

4.2.7 Menú de servicio

En el menú de servicio pueden modificarse parámetros de funcionamiento. El acceso está protegido por medio de un código. Este segundo nivel de mantenimiento está reservado a personal especializado y cualificado.

El acceso de personas no autorizadas a los ajustes de control anulará la garantía de la depuradora.

5. Manejo y mantenimiento

5.1 Obligaciones del propietario

La instalación deberá estar conectada constantemente. El propietario es responsable de que la depuradora funcione correctamente y sin fallos. Casi todos los fallos de funcionamiento llevan a una reducción de la capacidad de depuración de la depuradora. Por lo tanto deberán identificarse a tiempo y usted o un responsable de mantenimiento cualificado deberán resolverlos inmediatamente.

5.1.1 Controles diarios

Deberá comprobarse diariamente el correcto funcionamiento de la depuradora. Este será el caso cuando la luz de control de funcionamiento sea verde y no se oiga ninguna señal de aviso.

5.1.2 Controles mensuales

- Comprobación visual de posibles acumulaciones de lodo, turbidez o coloración del agua de salida
- Revisión de la entrada y la salida de agua en busca de posibles obstrucciones (comprobación visual)
- Leer el contador de horas de funcionamiento del compresor de aire (horas totales de funcionamiento), de la aireación (válvula Y3) y de la extracción de agua limpia (válvula Y4) y anotarlas en el registro de operaciones

5.2 Mantenimiento a través de una empresa especializada

Los trabajos de mantenimiento deberán realizarse por parte de un especialista al menos dos veces al año (en periodos de unos 6 meses aprox.). Deberán cumplirse además los intervalos de tiempo y trabajos establecidos en el permiso de vertido de aguas de la autoridad local. Para ello, el propietario de la depuradora deberá firmar un contrato de mantenimiento con un especialista cualificado.

En el marco de los trabajos de mantenimiento deberán llevarse a cabo los siguientes trabajos:

- Revisión del registro de funcionamiento con determinación del funcionamiento regular (comparación teórico-real)
- Revisión del filtro de aire del compresor
- Mantenimiento del compresor de aire de acuerdo a las indicaciones del fabricante
- Comprobación del funcionamiento del compresor de aire y de las electroválvulas
- Realización de los trabajos generales de limpieza, por ejemplo, eliminación de residuos
- Control de entrada y salida suficiente de aire
- Revisión de la aireación:
 - Concentración de oxígeno ($O_2/l > 2 \text{ mg}$), en caso necesario ajustar las horas de funcionamiento del compresor
 - Volumen de lodo ($< 900 \text{ ml/l}$)

En caso de que el volumen de lodo supere los 900 ml/l, éste deberá extraerse.

Los trabajos de mantenimiento realizados, los posibles daños detectados o reparaciones llevadas a cabo u otras indicaciones especiales deberán recogerse en un informe de mantenimiento elaborado por la empresa de mantenimiento.

5. Manejo y mantenimiento

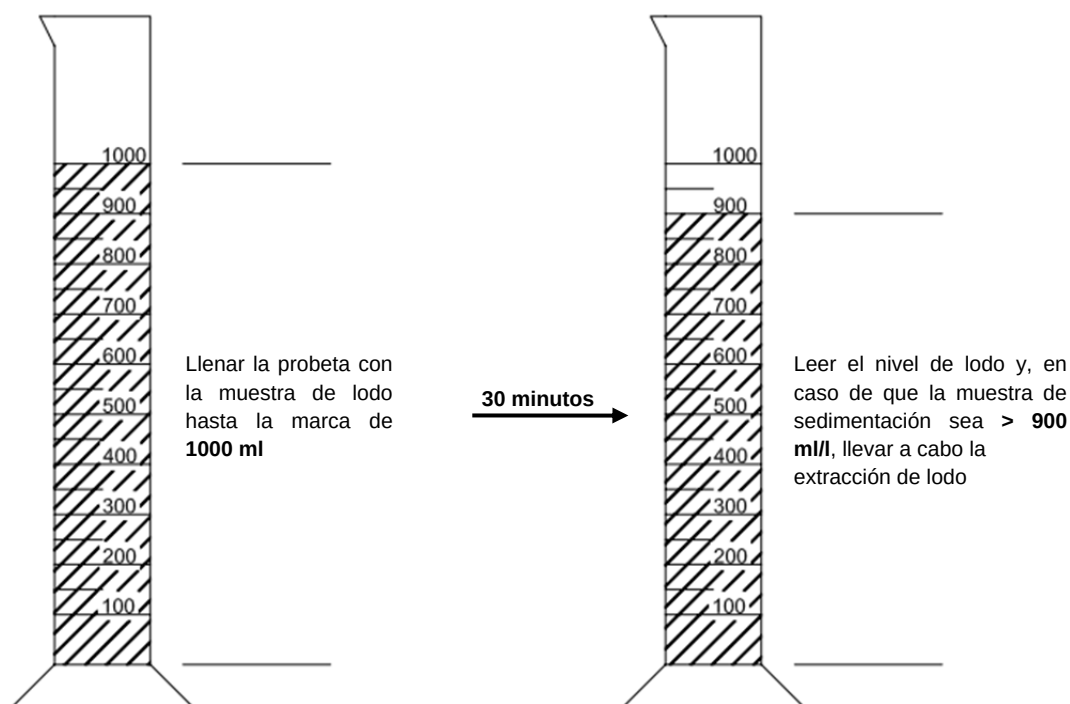
5.3 Determinación de la extracción de lodos

Para determinar la necesidad de extraer el lodo de la depuradora, deberá realizarse una prueba de sedimentación durante los intervalos de mantenimiento. Para esta prueba se mide el SV30. El SV30 es el volumen de lodo que hay en 1000 ml de agua después de un periodo de decantación de 30 minutos. Se trata de una medida de la cantidad de lodo presente en la depuradora.

La medición del SV30 se lleva a cabo en una probeta de 1000 ml.

Durante esta medición deberán seguirse los siguientes puntos:

12. Encender la aireación, en caso de que no esté activa, y dejar mezclar brevemente
13. Introducir un recipiente en el depósito y tomar una muestra de lodo
14. Llenar la probeta con la muestra de lodo hasta la marca de 1000 ml
15. Dejar reposar la probeta con la muestra durante 30 minutos
16. Leer el nivel de lodo y, en caso de que la muestra de sedimentación sea > 900 ml/l, llevar a cabo la extracción de lodo



5.4 Realización de la extracción de lodos

Durante la extracción de lodos de una depuradora deben llevarse a cabo los siguientes puntos:

12. Retirar la cubierta
13. Retirar los residuos de la superficie del agua y de todas las superficies visibles (pared divisoria, recipientes de muestras, elevador)
14. Limpiar las superficies visibles
15. Introducir la manguera de succión hasta el fondo del depósito
(ATENCIÓN: Los difusores tubulares del fondo no deben dañarse)
16. Aspirar hasta que en la depuradora queden unos 30 cm de agua residual y lodo
17. Finalizada la limpieza el tanque debe ser rellenarse nuevamente con agua

6. Mensajes de error y solución de fallos

6. Mensajes de error y solución de fallos

Los fallos técnicos de funcionamiento de la depuradora (fallo de un componente) se muestran visualmente y se almacenan en la memoria interna.

6.1 Comportamiento de la depuradora tras la desconexión del suministro eléctrico

En caso de que la instalación se desconecte de la red eléctrica (por ejemplo, en caso de apagón), los programas de control y las horas de funcionamiento ya contadas se almacenan en la memoria del control de la depuradora. El LED rojo se encenderá. Cuando la depuradora vuelva a tener corriente, ésta se iniciará automáticamente.

ADVERTENCIA: En caso de que la depuradora esté sin corriente durante más de 24 horas, no será posible depurar el agua residual existente o la depuración se verá significativamente reducida.

6.2 Mensajes de error en la pantalla

Los fallos se mostrarán en la pantalla LCD tanto en forma de texto como de código numérico. El LED de control de funcionamiento rojo se encenderá.

El código numérico del fallo tiene el siguiente significado:

11. Fallo de red (la depuradora no tiene corriente)
12. Red reestablecida (la instalación vuelve a recibir corriente)
13. Sobrecorriente del compresor
14. Suministro eléctrico del compresor muy bajo
15. Modo manual

Los mensajes número 2 (red reestablecida) y 5 (modo manual) no son fallos en el sentido literal de la palabra. Se registran como mensajes de error con el fin de poder limitar mejor temporalmente los posibles fallos o para comprobar las acciones manuales sobre el control.

Tabla3: Causa y solución de errores

Visualización	Posible causa	Solución
Fallo de red Sin mensaje, sin LED	- Fallo de corriente - Depuradora desconectada - No hay tensión en el armario de distribución	- Compruebe la fuente de alimentación de la depuradora y del control - Volver a encender la depuradora - Comprobar la alimentación del cuadro de control - Esperar al restablecimiento de la corriente
Sin mensaje, LED verde		Desconectar la depuradora y volver a conectar tras 10 segundos.
Red de vuelta	Suministro de corriente de nuevo disponible	
Ajustar hora	Hora/fecha interna no ajustada	Ajustar la fecha y la hora a través del punto del menú
Compresor **Sobrecorriente**	Cortocircuito	Comprobar la alimentación del cuadro de control
Compresor **Corriente muy baja**	El compresor no funciona / no recibe corriente	Comprobar el compresor a través del modo manual
Modo manual	La depuradora fue activada en modo manual	

6. Mensajes de error y solución de fallos

6.3 Niveles de agua inusuales - Solución de un fallo

Observación	Posible causa	Solución
El nivel del agua en el depósito de aireación es inusualmente alto	• La depuradora funciona en modo de vacaciones • La depuradora funciona constantemente en pausa del ciclo • Los ajustes de control son incorrectos • El sifón de salida está obstruido • La manguera de aire hacia el sifón de salida tiene fugas • La crecida en el cauce de desagüe no permite el drenaje del agua de la instalación • Control defectuoso	• Finalización del modo de vacaciones • Revisar los ajustes de control por medio de un especialista de mantenimiento • Bombear el contenedor y limpiar el elevador • Sellar las uniones de las mangueras • Esperar a que la crecida desaparezca • Ponerse en contacto con la empresa de mantenimiento
La depuradora desprende olor, el agua depurada está turbia o tiene color	• Entra muy poco aire en la depuradora • Aireación solo por un lado a causa de un difusor tubular defectuoso	• Aumento del tiempo de aireación por parte de la empresa de servicio • Comprobación de la aireación, ponerse en contacto con la empresa de mantenimiento
La aireación es unilateral o puntualmente ascienden grandes burbujas de aire	• Unidad de membranas defectuosa • La junta del difusor tubular no es estanca	• Ponerse en contacto con la empresa de mantenimiento • Ponerse en contacto con la empresa de mantenimiento

7. Indicaciones de funcionamiento

7. Indicaciones de funcionamiento

Básicamente solo deben entrar al interior de la depuradora sustancias cuyas características correspondan a las del agua residual doméstica.

Biocidas, sustancias tóxicas o no compatibles biológicamente no deben entrar en la depuradora, ya que causarían problemas biológicos en el proceso. Especialmente no deberán introducirse:

- Aguas pluviales
- Aguas externas (por ejemplo, aguas de drenaje)
- Residuos de animales, tanto en su forma sólida como líquida
- Aguas residuales industriales o agrícolas, siempre y cuando no sean comparables a aguas residuales domésticas
- Productos químicos, medicamentos, aceites minerales, disolvente
- Agua refrigerante
- Sustancias gruesas como restos de comida, plásticos y artículos de higiene, filtros de café, tapones de botellas y otros artículos domésticos
- Leche y productos lácteos
- Agua de piscinas
- Grandes cantidades de sangre

En caso de grandes cantidades de grasas o aceites vegetales, se recomienda predepurar ese agua residual con contenido aceitoso en un separador de grasa instalado antes de la depuradora (Atención: en el separador de grasa no deben introducirse sustancias fecales).

7. Indicaciones de funcionamiento

A continuación se indican de nuevo las sustancias individuales que no deben entrar en la depuradora:

Sustancias sólidas o líquidas que no deben eliminarse por el fregadero o el inodoro:	Lo que ocasionen	Dónde deben eliminarse
Cenizas	No se descomponen	Basura
Productos químicos	Envenenan el agua residual	Puntos de recogida
Desinfectante	Mata las bacterias	No utilizar
Colorantes	Envenenan el agua residual	Puntos de recogida del distrito
Grasa para freír	Se acumula en las tuberías y causa obstrucciones	Basura
Esparadrapo	Obstruye las tuberías	Basura
Colillas	Se acumulan en la instalación	Basura
Preservativos	Obstrucciones	Basura
Corchos	Se acumulan en la instalación	Basura
Medicamentos	Envenenan el agua residual	Puntos de recogida, farmacias
Aceite de motor	Envenena el agua residual	Puntos de recogida, gasolineras
Residuos aceitosos	Envenenan el agua residual	Puntos de recogida, gasolineras
Productos fitosanitarios	Envenenan el agua residual	Puntos de recogida del distrito
Limpiadores de pinceles/brochas	Envenenan el agua residual	Puntos de recogida del distrito
Productos de limpieza, excepto aquellos sin cloro (respetuosos con el medio ambiente)	Envenenan el agua residual, corroen tuberías y juntas	Puntos de recogida del distrito
Cuchillas de afeitar	Riesgo de lesiones para los responsables de trabajos en la canalización y en la depuradora	Basura
Limpiatuberías	Corroen tuberías y juntas, envenenan el agua	Puntos de recogida del distrito
Pesticidas	Envenenan el agua residual	Puntos de recogida del distrito
Compresas	Causan obstrucciones, las láminas de plástico no degradables deterioran el agua	Basura
Aceite alimenticio	Causa acumulaciones y obstrucciones en las tuberías	Puntos de recogida del distrito
Restos de comida	Causan obstrucciones, atraen a las ratas	Basura
Engrudo para el papel	Causa obstrucciones	Puntos de recogida del distrito
Tejidos (por ejemplo, medias de nailon, trapos, pañuelos, etc.)	Obstruyen las tuberías, pueden paralizar una estación de bombeo	Puntos de recogida de ropa usada
Disolventes	Envenenan el agua residual	Puntos de recogida del distrito
Arena para gatos y aves	Causa acumulaciones y obstrucciones en las tuberías	Basura
Bastoncillos de algodón	Obstruyen la instalación	Basura
Pastillas para WC	Envenenan el agua residual	No utilizar
Pañales	Obstruyen las tuberías	Basura
Agua de cemento	Se acumula, forma cemento	Eliminación por parte de una empresa especializada

8. Declaración CE de conformidad

8. Declaración CE de conformidad

Fabricante: Otto Graf GmbH
Carl-Zeiss-Straße 2-6
D-79331 Teningen

con la presente declara que el producto Depuradora **one2clean** cumple las estipulaciones de las siguientes directivas:

2006/42/CE Directiva del Parlamento Europeo y del Consejo del 17 de mayo de 2006 sobre máquinas y para la modificación de la Directiva 95/16/CE.

2006/95/CE «Directiva del Consejo sobre material eléctrico destinado a utilizarse con determinados límites de tensión»

Se han aplicado las siguientes normas armonizadas:

EN 60204-1 Equipos eléctricos en maquinaria, Parte 1: Requisitos generales

EN ISO 13849-1 Seguridad de máquinas – Partes de los sistemas de control relacionados con la seguridad – Parte 1: Principios generales para el diseño

Esta declaración de conformidad perderá su validez en caso de que el producto se modifique sin autorización.

Teningen, 22-02-14



Arne Schröder
(Jefe de equipo de gestión de productos)

9. Declaración de rendimiento

Declaración de prestaciones

one2clean

N° 008/Translation



1. Código distintivo del producto tipo	Pequeña depuradora conforme a EN 12566-3
2. Número de tipo, partida o serie u otro elemento que permita la identificación del producto de construcción con arreglo al artículo 11, apartado 4	One2clean 3-18 habitantes Tamaño del tipo y número de serie, en la placa del cuadro de mandos
3. Uso o usos del producto previstos por el fabricante conforme a la especificación técnica armonizada aplicable.	Depuración de aguas residuales domésticas de hasta 150 litros por habitante y día y con una carga de suciedad máxima de 0,06 kg/BSB ₅ por habitante y día (máxima de 0,0004 kg/BSB ₅ por litro)
4. Nombre, nombre comercial registrado o marca comercial registrada y dirección de contacto del fabricante con arreglo al artículo 11, apartado 5	Otto Graf GmbH Kunststoffzeugnisse Carl-Zeiss-Str. 2-6 79331 Teningen Alemania
5. Sistema o sistemas de valoración y verificación de la constancia de las prestaciones del producto de construcción conforme al anexo V	Sistema 3
6. El organismo notificador PIA (Prüfinstitut für Abwassertechnik GmbH - NB 1739) ha realizado la prueba de las prestaciones de la depuradora. Se ha comprobado la estabilidad, impermeabilidad, durabilidad y resistencia al fuego de los depósitos Carat: véase el apartado 7.	

7. Prestaciones declaradas		
	Prestación	Número de informe de la prueba
Depuración	DQO: 94,2 % 43 mg/l DBO ₅ : 98,0 % 7 mg/l NH ₄ -N: 98,3 % 0,5 mg/l N _{tot} : 87,0 % 7,9 mg/l SS: 98,3 % 14 mg/l	PIA2014-216B14.01.e
Impermeabilidad	superado	PIA2008-WD-AT0805-1027b (Carat S) PIA2016-WD-1509-1050.01 (Carat RS)
Estabilidad	superado	PIA2008-ST-AT0804-1019 (Carat S) PIA2016-ST-PIT-1509-1050.01 (Carat RS)
Durabilidad	superado	PIA2008-ST-AT0710-1020+DH (Carat S) PIA2016-DH-1509-1050.01 (Carat RS)
Resistencia al fuego	clase E	PIA2013-FR-1306-1039 (Carat S) PIA2016-RF-1509-1050.01 (Carat RS)

8. Las prestaciones del producto designado en los apartados 1 y 2 se corresponde con las prestaciones declaradas en el apartado 7. El responsable único por dicha declaración de prestaciones es el fabricante designado en el apartado 4.

Firmado para el fabricante y en nombre del fabricante por.



I.V. Arne Schröder
Director de equipo de gestión de producto

Teningen, 08.08.2016

10. Datos técnicos del cuadro de control

- Microcontrolador programable
- Fusible (interno) T3,15^a
- Fuente de alimentación de largo alcance 100-240 VAC / 50-60 Hz
- Reloj de tiempo real con desviación de 5 min/a, con almacenamiento temporal por batería
- Registro, protegido en caso de tensión nula
- Comprobación de los cables para el compresor por medio de la medición de la corriente de salida
- Indicación de mensajes de servicio/error con LEDs (verde/rojo)
- Rango de temperatura de funcionamiento 0 °C ... +55 °C
- Rango de temperaturas permitidas sin funcionar -20 °C ... +85 °C
- Humedad relativa 10...95 %, sin condensación
- Grado de protección IP54, parte frontal (con lámina frontal correctamente adherida)
- Panel de mando con 4 teclas
- Indicador: 2 líneas x 16 caracteres con retroiluminación (azul)
- Salidas:
 - o compresor 230 VAC 50 Hz (estándar)
 - o 2 motores paso a paso/válvulas magnéticas 24 VDC para corriente de aire comprimido

PERFORMANCE RESULTS

Otto Graf GmbH
 Carl-Zeiss-Str. 2-6, 79331 Tenningen, Germany

EN 12566-3
 Small wastewater treatment systems for up to 50 PT

Small wastewater treatment system one2clean
 SBR plant in a polypropylene tank

Nominal organic daily load	0.22	kg BOD ₅ /d
Nominal hydraulic daily load	0.60	m ³ /d
Material	polypropylene	
Treatment efficiency (nominal sequences)	COD	96.2 %
	BOD ₅	98.6 %
	SS	98.3 %
	NH ₄ -N	99.0 %
	N _{tot}	79.1 %
Electrical consumption	0.82	kWh/d

Performance tested by:

PIA – Prüfinstitut für Abwassertechnik GmbH
 (PIA GmbH)
 Hergenrather Weg 30
 D-52074 Aachen

This document replaces neither the declaration
 of conformity nor the CE marking.



Notified Body
 Nr.: 1739



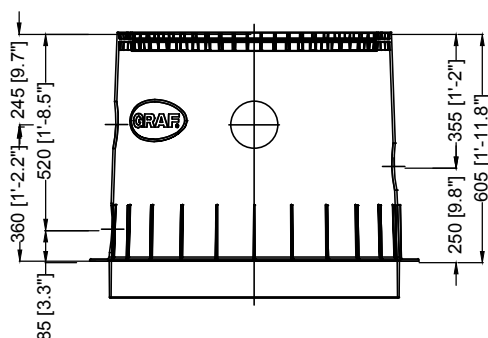
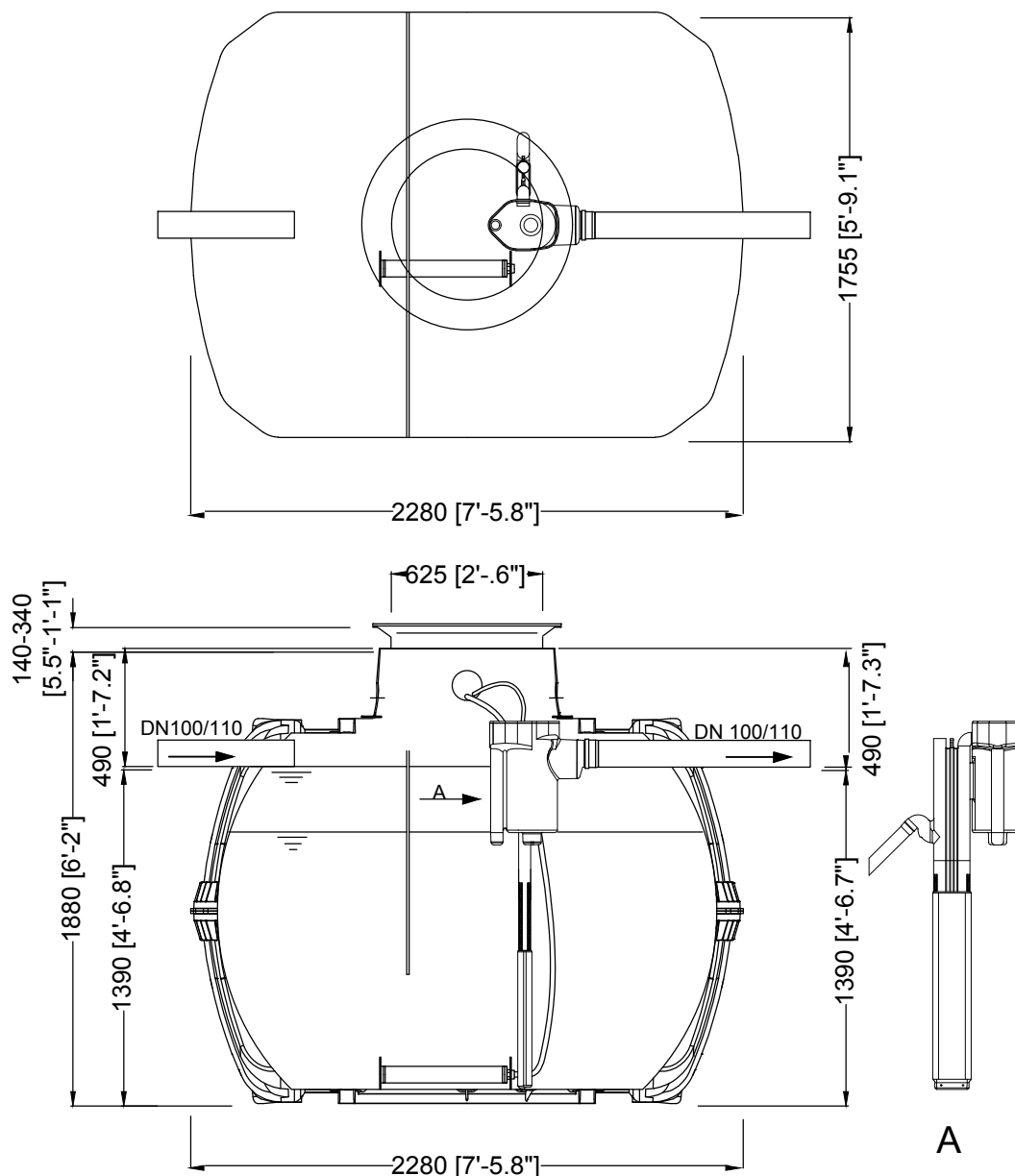
Certified according to
 ISO 9001:2008



Prüfinstitut für Abwassertechnik GmbH
 geprüft - tested - teste

Elmar Lancé

February 2014



Maxi Dom (optional)

- 320 mm mehr Einbautiefe
- 320 mm more excavation depth
- 320 mm más de profundidad
- 320 mm plus de profondeur d'installation



D one2clean 5 EW TD-Mini Carat S 3750 L / 990,6 gal.			Artikel-Nr. product no. article no. artículo no.
GB one2clean 5 Inh. TD-Mini Carat S 3750 L / 990,6 gal.	ES one2clean 5 PE Cúpula Mini Carat S 3750 L / 990,6 gal.	FR one2clean 5 EH Mini-dôme Carat S 3750 L / 990,6 gal.	revision
gezeichnet drawn ISC	Gewicht weight	Otto Graf GmbH Carl-Zeiss-Str. 2-6 DE-79331 Teningen mail@graf.info www.graf.info	
Datum date 2018.05.24	Toleranz tolerance +/- 3%		
Maßstab scale M 1:30 / 1:20	Einheiten units mm [inch] gal. = US gal.		



LRB-2020-15 – 19/02068/FLL - Siting of 2 camping pods, formation of a vehicular access and associated works, land 40 metres north east of Leven View, Wester Balgedie

REPRESENTATIONS



14th January 2020

Perth & Kinross Council
Pullar House 35 Kinnoull Street
Perth
PH1 5GD

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

Development Operations
Freephone Number - 0800 3890379
E-Mail - DevelopmentOperations@scottishwater.co.uk
www.scottishwater.co.uk

Dear Local Planner

KY13 Wester Balgedie Of Leven View Land 40 Metres
PLANNING APPLICATION NUMBER: 19/02068/FLL
OUR REFERENCE: 787164
PROPOSAL: Siting of 2 camping pods, formation of a vehicular access and associated works

Please quote our reference in all future correspondence

Scottish Water has no objection to this planning application; however, the applicant should be aware that this does not confirm that the proposed development can currently be serviced and would advise the following:

Water

- There is currently sufficient capacity in the GLENFARG Water Treatment Works. However, please note that further investigations may be required to be carried out once a formal application has been submitted to us.

Foul

- 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.

The applicant should be aware that we are unable to reserve capacity at our water and/or waste water treatment works for their proposed development. Once a formal connection application is submitted to Scottish Water after full planning permission has been granted, we will review the availability of capacity at that time and advise the applicant accordingly.

Surface Water

For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will **not** accept any surface water connections into our combined sewer system.

There may be limited exceptional circumstances where we would allow such a connection for brownfield sites only, however this will require significant justification taking account of various factors including legal, physical, and technical challenges. However it may still be deemed that a combined connection will not be accepted. Greenfield sites will not be considered and a connection to the combined network will be refused.

In order to avoid costs and delays where a surface water discharge to our combined sewer system is proposed, the developer should contact Scottish Water at the earliest opportunity with strong evidence to support the intended drainage plan prior to making a connection request. We will assess this evidence in a robust manner and provide a decision that reflects the best option from environmental and customer perspectives.

General notes:

- **Scottish Water asset plans can be obtained from our appointed asset plan providers:**

Site Investigation Services (UK) Ltd

Tel: 0333 123 1223

Email: sw@sisplan.co.uk

www.sisplan.co.uk

- Scottish Water's current minimum level of service for water pressure is 1.0 bar or 10m head at the customer's boundary internal outlet. Any property which cannot be adequately serviced from the available pressure may require private pumping arrangements to be installed, subject to compliance with Water Byelaws. If the developer wishes to enquire about Scottish Water's procedure for checking the water pressure in the area then they should write to the Customer Connections department at the above address.
- If the connection to the public sewer and/or water main requires to be laid through land out-with public ownership, the developer must provide evidence of formal approval from the affected landowner(s) by way of a deed of servitude.
- Scottish Water may only vest new water or waste water infrastructure which is to be laid through land out with public ownership where a Deed of Servitude has been obtained in our favour by the developer.
- The developer should also be aware that Scottish Water requires land title to the area of land where a pumping station and/or SUDS proposed to vest in Scottish Water is constructed.
- **Please find all of our application forms on our website at the following link <https://www.scottishwater.co.uk/business/connections/connecting-your-property/new-development-process-and-applications-forms>**

Next Steps:

- **Single Property/Less than 10 dwellings**

For developments of less than 10 domestic dwellings (or non-domestic equivalent) we will require a formal technical application to be submitted directly to Scottish Water or via the chosen Licensed Provider if non domestic, once full planning permission has been granted. Please note in some instances we will require a Pre-Development Enquiry Form to be submitted (for example rural location which are deemed to have a significant impact on our infrastructure) however we will make you aware of this if required.

- **10 or more domestic dwellings:**

For developments of 10 or more domestic dwellings (or non-domestic equivalent) we require a Pre-Development Enquiry (PDE) Form to be submitted directly to Scottish Water prior to any formal Technical Application being submitted. This will allow us to fully appraise the proposals.

Where it is confirmed through the PDE process that mitigation works are necessary to support a development, the cost of these works is to be met by the developer, which Scottish Water can contribute towards through Reasonable Cost Contribution regulations.

- **Non Domestic/Commercial Property:**

Since the introduction of the Water Services (Scotland) Act 2005 in April 2008 the water industry in Scotland has opened up to market competition for non-domestic customers. All Non-domestic Household customers now require a Licensed Provider to act on their behalf for new water and waste water connections. Further details can be obtained at www.scotlandontap.gov.uk

- **Trade Effluent Discharge from Non Dom Property:**

Certain discharges from non-domestic premises may constitute a trade effluent in terms of the Sewerage (Scotland) Act 1968. Trade effluent arises from activities including; manufacturing, production and engineering; vehicle, plant and equipment washing, waste and leachate management. It covers both large and small premises, including activities such as car washing and launderettes. Activities not covered include hotels, caravan sites or restaurants.

If you are in any doubt as to whether or not the discharge from your premises is likely to be considered to be trade effluent, please contact us on 0800 778 0778 or email TEQ@scottishwater.co.uk using the subject "Is this Trade Effluent?". Discharges that are deemed to be trade effluent need to apply separately for permission to discharge to the sewerage system. The forms and application guidance notes can be found using the following link <https://www.scottishwater.co.uk/business/our-services/compliance/trade-effluent/trade-effluent-documents/trade-effluent-notice-form-h>

Trade effluent must never be discharged into surface water drainage systems as these are solely for draining rainfall run off.

For food services establishments, Scottish Water recommends a suitably sized grease trap is fitted within the food preparation areas so the development complies with Standard 3.7 a) of the Building Standards Technical Handbook and for best management and housekeeping practices to be followed which prevent food waste, fat oil and grease from being disposed into sinks and drains.

The Waste (Scotland) Regulations which require all non-rural food businesses, producing more than 50kg of food waste per week, to segregate that waste for separate collection. The regulations also ban the use of food waste disposal units that dispose of food waste to the public sewer. Further information can be found at www.resourceefficientscotland.com

If the applicant requires any further assistance or information, please contact our Development Operations Central Support Team on 0800 389 0379 or at planningconsultations@scottishwater.co.uk.

Yours sincerely

Pamela Strachan
Planning Consultations Administrator

Comments for Planning Application 19/02068/FLL

Application Summary

Application Number: 19/02068/FLL

Address: Land 40 Metres North East Of Leven View Wester Balgedie

Proposal: Siting of 2 camping pods, formation of a vehicular access and associated works

Case Officer: Joanne Ferguson

Customer Details

Name: Mr Edward Todd

Address: [REDACTED]

Comment Details

Commenter Type: Comment from Same Household

Stance: Customer objects to the Planning Application

Comment Reasons:

- Inappropriate Land Use
- Out of Character with the Area
- Road Safety Concerns

Comment: I object to the proposed application for the following reasons:

1) The proposed site for the two Pods are out with the existing village boundary for Wester Balgedie.

2) The proposed development is on a "Greenfield site".

3) Access to the proposed site is on a blind corner of the road with poor visibility for site access and exit.

Perth + Kinross Council
Planning + Development,
35 Kinross Street,
Perth. PH1 5GD

Mrs. E. Morris

ENTERED IN COMPUTER

30 JAN 2020

29th January 2020

Dear Sir / Madam

Planning Application Ref: 19/02068 / FLE

I am writing to you as the owner of property within 20 metres of a site which is subject of an application for Planning Permission. My main reasons for objection are listed below.

- As I understand the above proposal falls outside the permitted boundary for development in the conservation area of Wester Balgedie, and this proposed site is not designated for development with the Area Plan.
- As I understand there has been no survey of the ground water run off or effluent discharge from this proposal.
- As a resident of Wester Balgedie I wonder what consideration has been taken into account for

the disturbance and noise levels that would be emitted from the proposed site, while guest are holidaying as close to a residential site as is proposed. The very nature of the site suggest some degree of outdoor living.

- As Wester Balgownie is a conservation area, with no street lighting, what guarantee would there be that there would be no intrusion from exterior lights from this commercial development.

Yours sincerely,

A black rectangular box redacting the signature of E. J. Morris.

E. J. MORRIS

Portmoak Community Council

Sue McGregor

secretary@portmoak.org
www.portmoak.org

29th January 2020

Development Management
Perth and Kinross Council
35 Kinnoull Street
Perth PH1 5GD

Ref A. 19/02068/FLL | Siting of 2 camping pods, formation of a vehicular access and associated works | Land 40 Metres North East Of Leven View Wester Balgedie.

Dear Madam, Sir,

PORTMOAK COMMUNITY COUNCIL – NOTICE OF COMMENT

Following notification of Ref A, Portmoak Community Council (PCC) discussed the aforementioned planning application at the CC meeting on 14th January 2020. In principle, the application was considered and accepted as meeting the required criteria under **Rural Business and Diversification (LDP 2 – Policy 8)**.

However, a number of objections were raised by the Community, namely: (a) noise (b) access and (c) concern regarding the oversupply of glamping pods/cabins (NOTE: 4 were approved in 4Q19 within 500m of the proposed site for 19/02068/FLL). As such, a separate meeting was held with the applicants to discuss the community objections in order to seek consensus. In addition, a further comment was raised that the development of the site may impact upon conceptual proposals for a new path linking Wester Balgedie and Glenlomond settlements.

Accordingly, Portmoak CC wishes to raise the following comments:

1. **Noise.** The proposed site is adjacent to a residential property (not owned by the applicants). Suitable noise mitigation measures will need to be agreed in order to ensure no detrimental impact to the aforementioned residential property.
2. **Access/Future Paths.** Access shall be gained to the proposed site via an existing field entrance already under the private ownership of the applicant. Suitable signage/mirrors may be required to mitigate the risk of accidents. Additionally, the proposed site is situated directly on the proposed route of the proposed path linking the settlements of Wester Balgedie and Glenlomond. Whilst plans for this path are in their infancy, the CC would request suitable scope to be permissible within the site plan to accommodate this path in the future.

Yours faithfully,

Sue McGregor
Secretary
Portmoak Community Council

Memorandum

To	Development Quality Manager	From	Regulatory Service Manager
Your ref	19/02068/FLL	Our ref	NK
Date	29 January 2029	Tel No	01738 476444

Housing & Environment

Pullar House, 35 Kinnoull Street, Perth PH1 5G

Consultation on an Application for Planning Permission

**RE: Siting of 2 camping pods, formation of a vehicular access and associated works
Land 40 Metres North East Of Leven View Wester Balgedie for Mr Andrew Orr**

I refer to your letter dated 14 January 2020 in connection with the above application and have the following comments to make.

Recommendation

I have no adverse comments in relation to the application.

Comments

I understand that this application is for 2 camping pods which will to be used for holiday accommodation. The proposed development site is located on land currently in agricultural use with the nearest residential property to the proposed development approximately 25 metres away. Due to the former use of the site and the scale and location of the development I do not envisage that the proposed use will impact on the amenity of any nearby residential properties and I would therefore have no objection to the proposal.

Informative

I would advise that if planning permission was granted, the site would be subject to licensing in terms of the Caravan Sites and Control of Development Act 1960, as amended. It would therefore be necessary for a caravan site licence to be obtained for the site before the pods were first brought into use and the site would need to comply with the caravan model standards for holiday use.



Joanne Ferguson
Perth and Kinross Council
Pullar House
35 Kinnoull Street
Perth
PH1 5GD

Our ref: PCS/169628
Your ref: 19/02068/FLL

If telephoning ask for: Paul Lewis

29 January 2020

By email only to: DevelopmentManagement@pkc.gov.uk

Dear Ms Ferguson.

**TOWN AND COUNTRY PLANNING (SCOTLAND) ACTS
PLANNING APPLICATION: 19/02068/FLL
SITING OF 2 CAMPING PODS, FORMATION OF A VEHICULAR ACCESS AND ASSOCIATED
WORKS
LAND 40 METRES NORTH EAST OF LEVEN VIEW, WESTER BALGEDIE.**

Thank you for your consultation which SEPA received on 17 January 2020.

We **object** to this planning application on the grounds of lack of information. We will review this objection if the issues detailed in Section 1 are adequately addressed.

Advice for the planning authority

1. Phosphorous mitigation

- 1.1 The [Loch Leven Special Protection Area and Ramsar Site](#) supplementary guidance (SG) was adopted in October 2016. The SG requires that information is submitted with Full or Approval of matters specified by condition (AMM) planning applications for new developments to provide details of proposed 125% phosphorous (P) mitigation.
- 1.2 The reason for this is to ensure that development accords with Policy 46: Loch Leven Catchment Area within the [Perth & Kinross Local Development Plan 2](#) adopted in November 2019. This requires that total phosphorous from built development must not exceed the current level to ensure there are no adverse impacts on water quality in Loch Leven SPA as the catchment has an issue with elevated nutrient levels. Given that this application does not provide any details of required P mitigation we **object** to this application due to lack of information.

Continued.....



Chairman
Bob Downes

Chief Executive
Terry A'Hearn

Perth Strathearn House

Broxden Business Park,
Lamberkine Drive, Perth, PH1 1RX
tel 01738 627989 fax 01738 630997

www.sepa.org.uk • customer enquiries 03000 99 66 99

- 1.3 Scottish Water has written to confirm there is no foul sewer nearby. The applicant has stated they will have a private treatment plant but no details are given for phosphate mitigation in line with current planning Perth & Kinross planning policy. Details of what properties are to be used for mitigation are required and what standards these will meet.

Detailed advice for the applicant

2. Phosphorous mitigation

- 2.1 Relevant information with regards forms of phosphorous mitigation proposals are contained within the SG.
- 2.1 The applicant should be aware that a mitigation property can only be considered for one planning application at a time. Perth and Kinross Council have a list of properties which are already linked to approved developments and are therefore unavailable to be mitigation for this application. Furthermore it should be noted that excess mitigation generated at one full/ AMM planning application cannot be transferred to another application as Policy 46 identifies that there is a presumption in favour of retaining such gains for the benefit of the ecological recovery of the Loch.

3. The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended)

- 3.1 The applicant should be aware that they will need to apply for a licence under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended (CAR)) for the discharge of foul effluent from the development. It should also be noted that any mitigating property will also require authorisation from us under CAR. Contact should be made with the Fife Operations team, details below, regarding this issue.
- 3.2 The provision of phosphorous mitigation to ensure that total phosphorous from built development does not exceed the current level is a separate issue to the CAR licence. The approval of submitted phosphorus mitigation details through the planning process is therefore made without prejudice to any CAR licence application and does not infer that the CAR licence application(s) will be approved. Conversely it is at the applicant's commercial risk if the CAR license application is progressed in advance of approval of P mitigation details.

Regulatory advice for the applicant

4. Regulatory requirements

- 4.1 Details of regulatory requirements and good practice advice for the applicant can be found on the [Regulations section](#) of our website. If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the regulatory team in your local SEPA office at:

Pentland Court, The Saltire Centre, Glenrothes, KY6 2DA
Tel. 01592 776910

Continued.....

If you have any queries relating to this letter, please contact me by telephone on 0131 273 7334 or e-mail at planning.se@sepa.org.uk.

Yours faithfully

Planning Service

ECopy to:

Disclaimer

This advice is given without prejudice to any decision made on elements of the proposal regulated by us, as such a decision may take into account factors not considered at this time. We prefer all the technical information required for any SEPA consents to be submitted at the same time as the planning or similar application. However, we consider it to be at the applicant's commercial risk if any significant changes required during the regulatory stage necessitate a further planning application or similar application and/or neighbour notification or advertising. We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that there is no impact associated with that issue. For planning applications, if you did not specifically request advice on flood risk, then advice will not have been provided on this issue. Further information on our consultation arrangements generally can be found on our [website planning pages](#).

Comments for Planning Application 19/02068/FLL

Application Summary

Application Number: 19/02068/FLL

Address: Land 40 Metres North East Of Leven View Wester Balgedie

Proposal: Siting of 2 camping pods, formation of a vehicular access and associated works

Case Officer: Joanne Ferguson

Customer Details

Name: Mrs C Cameron

Address: [REDACTED]

Comment Details

Commenter Type: Neighbour

Stance: Customer objects to the Planning Application

Comment Reasons:

- Contrary to Development Plan Policy
- Inappropriate Land Use
- Noise Pollution
- Out of Character with the Area
- Road Safety Concerns

Comment: This proposed application is outwith the village boundary and is proposed on prime agricultural land.

It is on an extremely dangerous single track corner with blind entrance/exit.

Not in keeping with a conservation area.

Comments to the Development Quality Manager on a Planning Application

Planning Application ref.	19/02068/FLL	Comments provided by	Lachlan MacLean Project Officer – Transport Planning
Service/Section	Transport Planning	Contact Details	TransportPlanning@pkc.gov.uk
Description of Proposal	Siting of 2 camping pods, formation of a vehicular access and associated works		
Address of site	Land 40 Metres North East Of Leven View, Wester Balgedie		
Comments on the proposal	The applicant has demonstrated that there is a suitable visibility splay from the junction where the development will join the public road network. There is a concern that surface water from the development may discharge onto the public road network, as a result, a condition will be added for the applicant to ensure that no surface water from the development will discharge onto the public road. Insofar as the Roads matters are concerned I have no objections to this proposal on the following conditions.		
Recommended planning condition(s)	Prior to the development hereby approved being completed or brought into use, the gradient of the access shall not exceed 3% for the first five metres measured back from the edge of the carriageway and the access shall be constructed so that no surface water is discharged to the public highway. Reason - In the interests of road safety; to ensure the provision of an adequate gradient of the access. Prior to the development hereby approved being completed or brought into use, the vehicular access shall be formed in accordance with Perth & Kinross Council's Road Development Guide Type B Figure 5.6 access detail with a kerbed radius of three metres, of Type B Road construction detail. The Type B Road construction detail shall continue for five metres measured back from the edge of the carriageway. Reason - In the interests of road safety; to ensure an acceptable standard of construction within the public road boundary.		
Recommended informative(s) for applicant	The applicant should be advised that in terms of Section 56 of the Roads (Scotland) Act 1984 he 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	2 March 2020		

LRB-2020-15 – 19/02068/FLL - Siting of 2 camping pods, formation of a vehicular access and associated works, land 40 metres north east of Leven View, Wester Balgedie

FURTHER INFORMATION

Further information from applicant, as requested by the LRB on 13 October 2020.

SITE JUSTIFICATION AND BUSINESS PLAN

19/02068/FLL: Siting of 2 camping pods, formation of a vehicular access and associated works at Land 40 metres North East of Leven View, Wester Balgedie

PERTH AND KINROSS LOCAL DEVELOPMENT PLAN 2

The exact location was chosen to satisfy the requirements of LDP2 Policy 8 which states that ‘the Council will give favourable consideration to the expansion of existing businesses and the creation of new ones in rural area. There is a preference that this will generally be within or adjacent to existing settlements’. The application site is immediately adjacent to the small settlement of Wester Balgedie, nestled behind existing housing with a mature landscape backdrop whilst orientated towards the spectacular Loch Leven. The application site is on the least productive part of the farm.

PKC LDP2 Policy 9C(c) specifies that such developments meet a specific need by virtue of its quality or location. The development is based on the landscape qualities of the area and the connections to Loch Leven. The location itself has robust marketing value with a feeling of being in the remote countryside with spectacular views to Loch Leven, yet close enough to local services, walking routes and public transport.

Being mindful of the location within the Loch Leven and Lomond Hills Special Landscape Area, this type of small scale, modest development is proposed and would have a very minor impact on the local landscape whilst protecting visual amenity. The surrounding established landscape would be capable of absorbing the proposed development and the materials used would ensure minimal visual impact. Further landscape containment and planting is proposed to ensure additional screening.

It is considered that the proposal would have a minimal impact on the special landscape characteristics of the area due to the mature and proposed landscaping. The units are small, single storey and modestly designed to ensure integration with the existing landscape.

FARM DIVERSIFICATION

The development is a diversification project of an existing small farming business. The current farming enterprise consists of pedigree beef breeding cattle and fattening sheep. Like most farming enterprises today, diversification is crucial to supplement income and add value whilst ensuring resilience for the overall business.

NFU Mutual recently published a document in partnership with Canopy, Impacts for a Glamping Business During Coronavirus, which states that glamping ‘sites have reported a huge rise in trade

and many have been running at 100% occupancy since the lockdowns have eased...early reports from owners confirm a welcome rise in bookings for next year already with some never having had revenue this early on. This points to a positive future for glamping and camping experiences in the UK we can all celebrate’.

MARKET RESEARCH

The national tourist boards within Great Britain have commissioned tracking research to measure UK residents’ holiday intentions with a Scotland specific report being available monthly. According to the latest report (October 2020) from Visit Scotland “‘Countryside or village’ remains the leading destination...while ‘camping/caravan/’ is again the second leading choice of accommodation for trips between Jan-March next year” (Visit Scotland, October 2020). The same report also notes that caravan/ camping was the number one choice of accommodation for Scotland holiday stays in July August 2020.

There is no denying that staycations and this type of self-contained holiday accommodation is currently thriving amidst the global pandemic. Whilst it is difficult to predict the future in these uncertain times, we anticipate, alongside all the leading market research, that domestic tourism with self-contained accommodation in the countryside will continue to thrive.

Perth and Kinross Factsheet 2018 published by Visit Scotland demonstrated an increase in domestic and international tourism for the area. Worth noting are the figures for 2018 domestic overnight tourism which saw an increase for all indicators including number of visits, spending, average length of stay with domestic visitors remaining steady from April through to December.

The local area is well frequented with tourists due to the picturesque location, various attractions, and numerous outdoor activities available. The area is well connected for walking and cycling, and the application site sits just 50 yards from SUStrans National Route 1. Scotland’s newest driving route, Heart 200 (a small scale version of the popular North Coast 500), also passes the application site. There is a small range of existing holiday accommodation in the Loch Leven area, however there is minimal sustainable, small scale camping options and it is believed that there is an opportunity for this type of short stay low cost holiday accommodation.

PRODUCTS AND PRICING

The business would offer two camping pods, both able to accommodate up to four people with ensuite facilities and operating as fully self-sufficient units. The average price per night would be £75 per pod and the Business Plan has been based on an estimated conservative 40% occupancy rate which is at the lower end of occupancy rates as shown in various market research publications. The package would include complimentary tea, coffee and locally produced sweet treats. All bedding would be provided, and the pods would be available to book all year round.

TARGET MARKET

The product appeals to many markets. However, the primary target market is couples who enjoy being close to nature, exploring the local area on foot or bike and using the camping pods as an overnight base.

MARKETING PLAN

The pods would initially be introduced through various social media platforms to build up momentum before a provisional grand opening in summer 2021. As one of the most powerful forms of advertising social media will be of the upmost important in launching the pods by allowing us to achieve 2 key things quickly with maximum impact.

- Building anticipation - Creating anticipation is vital when launching any new product and by posting exclusive images ahead of launch we will be able to build up anticipation and excitement ahead of our launch.
- Word of mouth advertising - One of the most powerful forms of advertising is word of mouth advertising and social networking capitalises on this. With strategic placement within local community Facebook groups, popular Scottish camping and glamping Facebook groups as well as working with travel bloggers this will help to launch the pods to a wide and waiting audience while simultaneously generating buzz about the pods.

We will also take advantage of social media advertising. The targeting abilities across Facebook and Instagram will allow us to micro target key audiences at reasonable prices, ensuring they make maximum impact prior and post launch.

PROJECTED START UP COSTS

<u>Product</u>	<u>Amount</u>
1 Pod	£10,000.00
1 Pod	£10,000.00
Marketing	£ 500.00
Electric Connection	£ 2,500.00
Site Sewage	£10,000.00
Groundworks	£ 3,000.00
Landscaping	£ 2,000.00
Soft furnishings	£ 1,000.00
Water Connection	£ 1,000.00
Phosphate Mitigation	£10,000.00
Other fees	£ 5,000.00
Total	£55,000.00

PROJECTED 4 YEAR CASHFLOW

	YEAR 1		YEAR 2		YEAR 3		YEAR 4	
	<u>Expenditure</u>		<u>Expenditure</u>		<u>Expenditure</u>		<u>Expenditure</u>	
Borrowing	£	55,000.00	Borrowing	£	38,500.00	Borrowing	£	22,000.00
Operating Costs	£	5,400.00	Operating Costs	£	5,400.00	Operating Costs	£	5,400.00
Total	£	60,400.00	Total	£	43,900.00	Total	£	27,400.00
	<u>Income</u>		<u>Income</u>		<u>Income</u>		<u>Income</u>	
Sales	£	21,900.00	Sales	£	21,900.00	Sales	£	21,900.00
Total	£	21,900.00	Total	£	21,900.00	Total	£	21,900.00
Surplus/ Deficit	-£	38,500.00	Surplus/ Deficit	-£	22,000.00	Surplus/ Deficit	-£	5,500.00

ASSUMPTIONS FOR PROJECTED CASHFLOW

	<u>Price/Night £</u>	<u>Annual estimated</u>	<u>Total annual</u>
		<u>occupancy %</u>	<u>income £</u>
1 pod	£ 75.00	40%	£ 10,950.00
1 pod	£ 75.00	40%	£ 10,950.00
		Total	£ 21,900.00

<u>Operating Costs for 2x Pods</u>		
	<u>Per month</u>	<u>Annual</u>
Utilities	£ 150.00	£ 1,800.00
Housekeeping	£ 200.00	£ 2,400.00
Maintenance	£ 100.00	£ 1,200.00
	Total	£ 5,400.00

PHOSPHATE MITIGATION CALCULATION

For

2 No Camping Pods - 40m NW of Leven View Cottage, Wester Balgedie, Kinross KY13 9HE

26th November 2020

GENERAL

Average water used per person per day	150litres
Septic tank treatment works discharge	10mgP/litre
Daily discharge of Phos from septic tank per person	15000mgP
Secondary Treatment Plant discharge with phosphate stripping	2mgP/litre
Daily discharge of Phosp per person	300mgP

PROPOSED DEVELOPMENT

2 No Camping Pods - 40m NW of Leven View Cottage, Wester Balgedie, Kinross KY13 9HE

2 No 2 person camping pods (5 persons / property in line with Flows & Loads 4)

Total Population	2x5 =	10 persons
Secondary treatment STP with phosphate stripping facility to achieve		2mgP/litre
Daily discharge of phos = 2mg/ litreP x150x10PE		3000mgP/day

PHOSPHOROUS MITIGATION REQUIRED

Mitigation requires a reduction of 125% of the amount of phosphorus to be discharged from the new development = 125%x3000mgP/day

3750mgP / day

MITIGATION OFFERED

Mitigation is proposed by upgrading an existing septic tank serving

Lathro Farmhouse, Milnathort, Kinross KY13 9SY

A new secondary treatment plant with phosphate stripping facility to achieve 2mgP/litre will be installed.

The existing property has 3 bedrooms – 5 person equivalent

Therefor Total Population Equivalent =5 Persons

Existing Discharge from the property =10mg/ litreP x150x5PE	7500mgP /day
Discharge after upgrade to 2mg/litre ` = 2mg/ litreP x150x5PE	1500mgP/day
Mitigation offered is 7500-1500 =	6000mgP / day

In Excess Of Requirement

Local Review Board
Perth and Kinross Council
Pullar House
35 Kinnoull Street
Perth
PH1 5GD

Our ref: PCS/174108
Your ref: 19/02068/FLL

By email only to: PlanningLRB@pkc.gov.uk

3 December 2020

To whom it may concern

**TOWN AND COUNTRY PLANNING (SCOTLAND) ACTS
PLANNING APPLICATION: 19/02068/FLL
SITING OF 2 CAMPING PODS, FORMATION OF A VEHICULAR ACCESS AND
ASSOCIATED WORKS
LAND 40 METRES NORTH EAST OF LEVEN VIEW, WESTER BALGEDIE**

I am writing in relation to the email (copied below) sent to SEPA and Perth & Kinross Council on 27 November 2020. Attached to the email were phosphate mitigation calculations which have been provided in support of planning application 19/02068/FLL.

Advice for the planning authority

We have assessed the phosphate mitigation calculations are correct.

We would note, however, that the 'daily discharge of P from septic tank per person' is 1,500 mg/P/day, not 15,000.

The two glamping pods and the mitigating property (Lathro Farmhouse) will each need a CAR simple licence to authorise the private sewage discharge from the new treatment systems, and the applicant should contact the local regulatory services team to discuss.

Regulatory advice for the applicant

Details of regulatory requirements and good practice advice for the applicant can be found on the [Regulations section](#) of our website. If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the regulatory services team in the local SEPA office at: FAD@sepa.org.uk

If you have any queries relating to this letter, please contact me by e-mail at planning.se@sepa.org.uk

Continued...

Yours faithfully

Paul Lewis
Senior planning officer
Planning Service

ECopy to: Mr Andrew Orr – [REDACTED]

Disclaimer

This advice is given without prejudice to any decision made on elements of the proposal regulated by us, as such a decision may take into account factors not considered at this time. We prefer all the technical information required for any SEPA consents to be submitted at the same time as the planning or similar application. However, we consider it to be at the applicant's commercial risk if any significant changes required during the regulatory stage necessitate a further planning application or similar application and/or neighbour notification or advertising. We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that there is no impact associated with that issue. For planning applications, if you did not specifically request advice on flood risk, then advice will not have been provided on this issue. Further information on our consultation arrangements generally can be found on our [website planning pages](#).

From: andrew orr <[REDACTED]>
Sent: 27 November 2020 08:19
To: planning.se@sepa.org; Lewis, Paul [REDACTED] Joanne Ferguson <[REDACTED]>
Subject: PKC Planning Application 19/02068/FLL

Good Morning

SEPA previously commented on our planning application (ref above) with regards to phosphate mitigation within the Loch Leven Catchment Area. The application was refused with delegated powers but has since been put before the LRB who have deferred the application for additional information on the phosphorous mitigation. We now have these calculations available, see attached.

Unfortunately we are under tight time pressure and have been asked to submit this, along with a response from SEPA by 1 December. Apologies for the short timescales but I would be extremely grateful if you were able to look over these and inform if these proposals satisfy SEPA requirements before Tuesday.

I have also CC'd the relevant PKC Planning Officer for information.

I look forward to hearing from you.

Kind Regards

Andrew Orr

Sent from [Mail](#) for Windows 10