

**KH PSD2 OPEN BANKING  
&  
THIRD PARTY PROVIDERS INTEGRATION  
  
TESTING FACILITY GUIDE**

Date	Author	Version	Comments
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## 1. Introduction

Open Banking is the result of a regulation introduced by The Competition & Markets Authority. It will deliver a platform for greater competition and choice for customers. It will enable personal and business customers to share their data securely with banks and third parties, allowing them to compare products, initiate payments and request account information. The data is shared via Application Programming Interfaces (APIs).

### Third Party Provider Portals

If you are an authorised Third-Party Provider (TPP) by the FCA please use the following links to access our dedicated Open Banking portals:

Well-known end point can be found in this link:

<https://sandbox.kleinworthambros.com/auth/.well-known/openid-configuration>

## 2. Onboarding Process

You must be enrolled and registered on the Open Banking directory to participate securely within the Open Banking ecosystem.

We currently support Dynamic registration processes. Request details could be found in above open-id configuration well known endpoint. Please request your KH secure details by using contact details in part 8.

Well-known Endpoint -> <https://sandbox.kleinworthambros.com/auth/.well-known/openid-configuration>

Dynamic Registration -> <https://sandbox.kleinworthambros.com/auth/api/reg>

KH Secure access link -> <https://ebanking-test.kleinworthambros.com>

### 3. Sandbox Access Links

This will allow you to perform some early integration and technical Proof-Of-Concept, without the need to request connectivity to the live APIs.

Token	<a href="https://sandbox.kleinworthambros.com/auth/api/token">https://sandbox.kleinworthambros.com/auth/api/token</a>
Assets	<a href="https://sandbox.kleinworthambros.com/Accounts/open-banking/v3.1/">https://sandbox.kleinworthambros.com/Accounts/open-banking/v3.1/</a>
Assets Consent	<a href="https://sandbox.kleinworthambros.com/consents/open-banking/v3.1/aisp/account-access-consents">https://sandbox.kleinworthambros.com/consents/open-banking/v3.1/aisp/account-access-consents</a>
Payments	<a href="https://sandbox.kleinworthambros.com/payments/open-banking/v3.1/">https://sandbox.kleinworthambros.com/payments/open-banking/v3.1/</a>
Authorization	<a href="https://sandbox.kleinworthambros.com/aspsp/authorize">https://sandbox.kleinworthambros.com/aspsp/authorize</a>

KH Open Banking Sandbox will be accessible from **14<sup>th</sup> March 2019**.

### 4. End Points readiness

#### a. Accounts and Transactions API

The Account and Transaction API is intended to give a third party, upon consent of the owning customer, access to product, service and transaction information relating to that account such that they may provide the customer with value-adding products or services.

i. Account-access-consents	POST /account-access-consents GET /account-access-consents/{ConsentId} DELETE /account-access-consents/{ConsentId}
ii. Accounts	GET /accounts GET /accounts/{AccountId}

iii. Balances	GET /accounts/{AccountId}/balances
iv. Transactions	GET /accounts/{AccountId}/transactions
v. Beneficiaries	GET /accounts/{AccountId}/beneficiaries
vi. Direct Debits	GET /accounts/{AccountId}/direct-debits
vii. Standing Orders	GET /accounts/{AccountId}/standing-orders
viii. Scheduled Payments	GET /accounts/{AccountId}/scheduled-payments
ix. Statements	GET /accounts/{AccountId}/statements

**b. Confirmation of Funds**

Funds Confirmation Consent	POST /funds-confirmation-consents GET /funds-confirmation-consents/{ConsentId} DELETE /funds-confirmation-consents/{ConsentId}
Funds Confirmation	POST /funds-confirmations

**c. Payments Initiation**

The payment initiation API enables any third party, registered as an approved Payment Initiation Service Provider (PISP) with Open Banking, to provision secure payments on behalf of our customers. The payment, once approved and authorised by the customer, is submitted for processing.

We currently support the submission of domestic and international payments from our customer’s UK personal and business current accounts.

<b>i. Domestic Payments</b>	POST /domestic-payment-consents GET /domestic-payment-consents/{ConsentId} GET /domestic-payment-consents/{ConsentId}/funds-confirmation
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	POST /domestic-payments GET /domestic-payments/{DomesticPaymentId}
<b>ii. Domestic Scheduled Payments</b>	POST /domestic-scheduled-payment-consents GET /domestic-scheduled-payment-consents/{ConsentId} POST /domestic-scheduled-payments GET /domestic-scheduled-payments/{Domestic ScheduledPaymentId}
<b>iii. International Payments</b>	POST /international-payment-consents GET /international-payment-consents/{ConsentId} GET /international-payment-consents/{ConsentId}/funds-confirmation POST /international-payments GET /international-payments/{InternationalPaymentId}
<b>iv. International Scheduled Payments</b>	POST /international-scheduled-payment-consents GET /international-scheduled-payment-consents/{ConsentId} GET /international-scheduled-payment-consents/{ConsentId}/funds-confirmation POST /international-scheduled-payments GET /international-scheduled-payments/{InternationalScheduledPaymentId}

**d. API Response Codes**

200	OK
201	Created
204	No Content
400	Bad Request (Standard Error Codes to be found in R/W Data API Specification -v3.1)
401	Unauthorized
403	Forbidden
405	Method Not Allowed
406	Not Acceptable
429	Too Many Requests
500	Internal Server Error
503	Service Unavailable

## 5. Test Data

All the relevant test data / test clients will be provided to TPP's once they are onboarded to test the Sandbox.

- Test Clients
- Test Accounts
- Test Beneficiaries
- Remaining test data like transactions, statements...etc
- TPPs will need to activate KH secure application using test client credentials (see part 6).

## 6. Activating KH Secure application for OTP

TPP needs to activate KH secure application by using test client UserID and Password:

- Download the application:  
<https://play.google.com/store/apps/details?id=com.kleinworthambros.khsecure&hl=en>  
<https://itunes.apple.com/gb/app/kh-secure/id1407876284>
- Install application
- Accept access requests
- Access eBanking test page:  
<https://ebanking-test.kleinworthambros.com>
- Log-in using credentials provided
- Follow instruction on screen and on the app (includes scanning 2 images)
- Create access PIN/Biometric security for the app
- App can be used now to generate OTP/PAC

## 7. Limited Functionality

- Dynamic Registration request body must be inside double quotes “....”
- Assets Consent has a separate deployment outside assets endpoints and we will contact when merged in
- We only support RS256 until further notice
- International Payments we only support currency GBP and USD
- We do not support internal transfers until further notice
- Only existing beneficiary is supported for payments

- JWS signature is not available at this moment

## 8. Contact Details

E – mail: [openbankingsupport@kleinworthambros.com](mailto:openbankingsupport@kleinworthambros.com)

NAME	ROLE	PHONE	E-MAIL
PAULAUSKAS Linas	Primary Technical Contact	+442075973395	<a href="mailto:linas.paulauskas@kleinworthambros.com">linas.paulauskas@kleinworthambros.com</a>
LI Xiang	Technical Business Analyst	+442075973006	<a href="mailto:xiang.li@kleinworthambros.com">xiang.li@kleinworthambros.com</a>
KANANATA Ravi	IT Project Manager	+442075973012	<a href="mailto:ravi.kananata@kleinworthambros.com">ravi.kananata@kleinworthambros.com</a>
RUPARELIA Amit	Project Manager	+442075973245	<a href="mailto:amit.ruparelia@kleinworthambros.com">amit.ruparelia@kleinworthambros.com</a>